



State of California - Health and Human Services Agency

California Department of Public Health

Drinking Water and Radiation Laboratory Branch

850 Marina Bay Parkway, Richmond, CA 94804

Phone: (510) 620-2911 Fax: (510) 620-2940



FINAL Analysis Results Report for Task ID. 13-0897

Investigator: J M S	DC REM	Requestor: Roger Lupo	RHB
San Louis Obisp CA		CDPH - RHB, 1500 Capitol Av., MS 7610	
Phone Number:		Sacramento CA 95814-5006	
		Phone Number: 916-440-7955	
Site/Project Name: San Onofre NPP / SONGS B / 4th Qtr 2013			
System No:	Billing Agency: RHB	Samples Received by Lab: 10/24/2013	

Parameter	Method	Result +/- CE	MDA 95	Units
Lab No: 13-0897-01	Sample ID: R 94054	Time Collected: 10/22/2013 10:46	Sampling Point: Sediment	
	Sample Type: Soil/Sediment			
Dry Wt/Wet Wt		0.768		
K-40	HASL Ga-01-R	14.3 +/- 0.326	0.238	pCi/g dry wt

- (1) Precision criteria for these method were determined to be acceptable.
- (2) CE is the counting error at the 95% confidence level as defined in Prescribed Procedures for Measurement of Radioactivity in Drinking Water, EPA-600/4-80-032, August 1980.
- (3) MDA95 is the sample specific minimum detectable activity at the 95% confidence level which is the LLD95 divided by 2.22, the efficiency, and the yield, and may include factors for abundance, decay, and ingrowth, dependent on the particular radio-nuclide. LLD95 is defined in section 7010G, Standard Methods for the Examination of Water and Wastewater, American Water Works Association, 21st Ed., 2005, where Sb is the square root of the instrument background count rate.

REQUEST FOR SAMPLE ANALYSIS (Radiochemical)

Drinking Water and Radiation Laboratory Branch 850 Marina Bay Parkway, G164 Richmond, CA 94804 510-620-2911	Date Received 10-24-13	Lab No. (Leave Blank) 13-0897
	Date & Time Sampled 10-22-13 10:46	Serial Number R 94054
Collector Information Name: Dept./Branch: Address: Telephone No.:	Reporting Information Name: Dept./Branch: Address: Telephone No.:	
Sample Information System Name / Facility: Sampling Point (s): System No.:	Billing Agency <input type="checkbox"/> DWFOB () <input type="checkbox"/> RHB <input type="checkbox"/> RWQCB () <input type="checkbox"/> DTSC <input type="checkbox"/> DWTPB <input type="checkbox"/> FDB <input type="checkbox"/> DWR <input type="checkbox"/> CDFG <input type="checkbox"/> EMB <input type="checkbox"/> Other (Specify) _____	

TYPE OF SAMPLE (Check all applicable boxes)

- | | | | |
|---|--|--|--|
| <input type="checkbox"/> Drinking Water | <input type="checkbox"/> Groundwater | <input type="checkbox"/> Surface Water | <input type="checkbox"/> Wastewater |
| <input type="checkbox"/> Raw | <input type="checkbox"/> Water Treatment Plant (WTP) | <input type="checkbox"/> Distribution System | <input type="checkbox"/> Point of Use (POU) |
| <input type="checkbox"/> Treated (circle one): Chlorinated / Chloraminated / Chlorine Dioxide / Ozonated / Peroxzone / Fluoridated / Coagulated / pH Adjusted | | | |
| <input type="checkbox"/> Air Filters | Date/Time | <input type="checkbox"/> Seawater | <input type="checkbox"/> Sludge (Semi-solid Samples) |
| Finishing: _____ | _____ | <input type="checkbox"/> Milk | <input checked="" type="checkbox"/> Soil/Sediment |
| Starting: _____ | _____ | <input type="checkbox"/> Wipes | <input type="checkbox"/> Biota (Type): _____ |
| Net (M ³) _____ | _____ | <input type="checkbox"/> Radon Canister | <input type="checkbox"/> Other: _____ |
| <input type="checkbox"/> Air Charcoal Cartridge | | | |

COMMENTS: (Cautions, etc.):

- ☐ Field Treatment: Preservatives added: _____ Iced/Frozen: _____ Other: _____
- ☐ Field Measurement: _____ mR/hr ☐ Radionuclide(s), if known: _____
- ☐ Rush/Priority (should be prearranged and have supervisory approval)

ANALYSIS REQUESTED (For questions, please call 510-620-2911)

- | | | |
|---|--|--|
| <input type="checkbox"/> Gross Alpha | <input type="checkbox"/> Gross Beta | <input type="checkbox"/> Gamma Scan |
| <input type="checkbox"/> Total Uranium | <input type="checkbox"/> Total Beta (LSC) | <input type="checkbox"/> NORM (Gamma) |
| <input type="checkbox"/> Total Radium | <input type="checkbox"/> Tritium (³ H) | <input type="checkbox"/> Isotopic Americium / Curium |
| <input type="checkbox"/> Radium-226 | <input type="checkbox"/> Carbon-14 | <input type="checkbox"/> Isotopic Plutonium |
| <input type="checkbox"/> Radium-228 | <input type="checkbox"/> Iodine-131 | <input type="checkbox"/> Isotopic Thorium |
| <input type="checkbox"/> Radon-222 | <input type="checkbox"/> Strontium-89, 90 | <input type="checkbox"/> Isotopic Uranium |
| <input type="checkbox"/> Other (Specify): _____ | <input type="checkbox"/> Nickel-63 | <input type="checkbox"/> Iron-55 |

CHAIN OF CUSTODY

- | | | | |
|----|-----------------------------|--------------------|-----------------------------------|
| 1. | Date _____ | Name (Print) _____ | Date _____ |
| | Time Custody Received _____ | Organization _____ | Signature _____ |
| 2. | Date _____ | Name (Print) _____ | Date _____ |
| | Time Custody Received _____ | Organization _____ | Signature _____ |
| 3. | Date 10-24-13 | Name (Print) UVA | Date _____ |
| | Time Custody Received 11:00 | Organization DWRLB | Signature Victoria M. [Signature] |
| | | | Time Custody Released _____ |

LABORATORY REMARKS (Leave Blank)

- A. Condition at Time of Receipt:
- | | | | |
|--|--|--|---|
| <input type="checkbox"/> Acceptable | <input type="checkbox"/> Broken Container | <input type="checkbox"/> Leaked in Transit | <input type="checkbox"/> Improper Container |
| <input type="checkbox"/> Holding Time Exceeded | <input type="checkbox"/> Sample Not Cooled | <input type="checkbox"/> Insufficient Sample | |
- B. Preservatives/Carriers:
- | | | | |
|---|--|------------------------------------|---|
| <input type="checkbox"/> Added While Sampling | <input type="checkbox"/> Added in Laboratory | <input type="checkbox"/> Not Added | <input type="checkbox"/> Not Applicable |
|---|--|------------------------------------|---|



State of California - Health and Human Services Agency

California Department of Public Health

Drinking Water and Radiation Laboratory Branch

850 Marina Bay Parkway, Richmond, CA 94804

Phone: (510) 620-2911 Fax: (510) 620-2940



FINAL Analysis Results Report for Task ID. 13-0898

Investigator: J M S	DC REM	Requestor: Roger Lupo	RHB
San Louis Obisp CA		CDPH - RHB, 1500 Capitol Av., MS 7610	
Phone Number:		Sacramento CA 95814-5006	
		Phone Number: 916-440-7955	
Site/Project Name: San Onofre NPP / SONGS C / 4th Qtr 2013			
System No:	Billing Agency: RHB	Samples Received by Lab: 10/24/2013	

Parameter	Method	Result +/- CE	MDA 95	Units
Lab No: 13-0898-01	Sample ID: R 94055	Time Collected: 10/22/2013 09:28	Sampling Point: Sediment	
	Sample Type: Soil/Sediment			
Dry Wt/Wet Wt		0.814		
K-40	HASL Ga-01-R	14.3 +/- 0.326	0.295	pCi/g dry wt

- (1) Precision criteria for these method were determined to be acceptable.
- (2) CE is the counting error at the 95% confidence level as defined in Prescribed Procedures for Measurement of Radioactivity in Drinking Water, EPA-600/4-80-032, August 1980.
- (3) MDA95 is the sample specific minimum detectable activity at the 95% confidence level which is the LLD95 divided by 2.22, the efficiency, and the yield, and may include factors for abundance, decay, and ingrowth, dependent on the particular radio-nuclide. LLD95 is defined in section 7010G, Standard Methods for the Examination of Water and Wastewater, American Water Works Association, 21st Ed., 2005, where Sb is the square root of the instrument background count rate.

REQUEST FOR SAMPLE ANALYSIS (Radiochemical)

Drinking Water and Radiation Laboratory Branch

850 Marina Bay Parkway, G164
Richmond, CA 94804
510-620-2911

Date Received

10-24-13

Lab No. (Leave Blank)

13-08948

Date & Time Sampled

10-22-13 9:25

Serial Number

R 94055

Collector Information

Name:

Dept./Branch:

Address:

JNS

Telephone No.:

Sample Information

System Name / Facility:

Sampling Point (s):

Sonap C

Reporting Information

Name:

Dept./Branch:

Address:

Telephone No.:

Billing Agency

☐ DWFOB ()☐ RHB☐ RWQCB ()☐ DTSC☐ DWTPB☐ FDB☐ DWR☐ CDFG☐ EMB☐ Other (Specify) _____

System No.:

TYPE OF SAMPLE (Check all applicable boxes)

☐ Drinking Water☐ Groundwater☐ Surface Water☐ Wastewater☐ Raw☐ Water Treatment Plant (WTP)☐ Distribution System☐ Point of Use (POU)☐ Treated (circle one): Chlorinated / Chloraminated / Chlorine Dioxide / Ozonated / Peroxzone / Fluoridated / Coagulated / pH Adjusted☐ Air Filters

Date/Time

☐ Seawater☐ Sludge (Semi-solid Samples)

Finishing: _____

☐ Milk☒ Soil/Sediment

Starting: _____

☐ Wipes☒ Biota (Type): _____Net (M³) _____☐ Radon Canister☐ Other: _____☐ Air Charcoal Cartridge

COMMENTS: (Cautions, etc.):

☐ Field Treatment: Preservatives added: _____

Iced/Frozen: _____

Other: _____

☐ Field Measurement: _____ mR/hr☐ Radionuclide(s), if known: _____☐ Rush/Priority (should be prearranged and have supervisory approval)

ANALYSIS REQUESTED (For questions, please call 510-620-2911)

☐ Gross Alpha☐ Gross Beta☐ Gamma Scan☐ Total Uranium☐ Total Beta (LSC)☐ NORM (Gamma)☐ Total Radium☐ Tritium (³H)☐ Isotopic Americium / Curium☐ Radium-226☐ Carbon-14☐ Isotopic Plutonium☐ Radium-228☐ Iodine-131☐ Isotopic Thorium☐ Radon-222☐ Strontium-89, 90☐ Isotopic Uranium☐ Other (Specify): _____☐ Nickel-63☐ Iron-55

CHAIN OF CUSTODY

1.	Date	Name (Print)	Signature	Date
	Time Custody Received	Organization		Time Custody Released
2.	Date	Name (Print)	Signature	Date
	Time Custody Received	Organization		Time Custody Released
3.	Date 10-24-13	Name (Print) UA	Signature Victor M. De	Date
	Time Custody Received 11:00	Organization DWPLB		Time Custody Released

LABORATORY REMARKS (Leave Blank)

A. Condition at Time of Receipt:

☐ Acceptable☐ Broken Container☐ Leaked in Transit☐ Improper Container☐ Holding Time Exceeded☐ Sample Not Cooled☐ Insufficient Sample

B. Preservatives/Carriers:

☐ Added While Sampling☐ Added in Laboratory☐ Not Added☐ Not Applicable



State of California - Health and Human Services Agency

California Department of Public Health

Drinking Water and Radiation Laboratory Branch

850 Marina Bay Parkway, Richmond, CA 94804

Phone: (510) 620-2911 Fax: (510) 620-2940



FINAL Analysis Results Report for Task ID. 13-0899

Investigator: J M S	DC REM	Requestor: Roger Lupo	RHB
San Louis Obisp CA		CDPH - RHB, 1500 Capitol Av., MS 7610	
Phone Number:		Sacramento CA 95814-5006	
		Phone Number: 916-440-7955	
Site/Project Name: San Onofre NPP / SONGS D / 4th Qtr 2013			
System No:	Billing Agency: RHB	Samples Received by Lab: 10/24/2013	

Parameter	Method	Result +/- CE	MDA 95	Units
Lab No: 13-0899-01	Sample ID: R 94056	Time Collected: 10/22/2013 10:05	Sampling Point: Sediment	
	Sample Type: Soil/Sediment			
Dry Wt/Wet Wt		0.787		
K-40	HASL Ga-01-R	16.9 +/- 0.369	0.253	pCi/g dry wt

- (1) Precision criteria for these method were determined to be acceptable.
- (2) CE is the counting error at the 95% confidence level as defined in Prescribed Procedures for Measurement of Radioactivity in Drinking Water, EPA-600/4-80-032, August 1980.
- (3) MDA95 is the sample specific minimum detectable activity at the 95% confidence level which is the LLD95 divided by 2.22, the efficiency, and the yield, and may include factors for abundance, decay, and ingrowth, dependent on the particular radio-nuclide. LLD95 is defined in section 7010G, Standard Methods for the Examination of Water and Wastewater, American Water Works Association, 21st Ed., 2005, where Sb is the aquare root of the instrument background count rate.

REQUEST FOR SAMPLE ANALYSIS (Radiochemical)

Drinking Water and Radiation Laboratory Branch

850 Marina Bay Parkway, G164
Richmond, CA 94804
510-620-2911

Date Received

10-24-13

Lab No. (Leave Blank)

13-0899

Date & Time Sampled

10-22-13 10:05

Serial Number

R 94056

Collector Information

Name:
Dept./Branch:
Address:

JNS

Telephone No.:

Reporting Information

Name:
Dept./Branch:
Address:

Telephone No.:

Sample Information

System Name / Facility:
Sampling Point (s):

Soup D

System No.:

Billing Agency

☐ DWFOB () ☐ RHB ☐ RWQCB () ☐ DTSC
☐ DWTPB ☐ FDB ☐ DWR ☐ CDFG
☐ EMB ☐ Other (Specify) _____

TYPE OF SAMPLE (Check all applicable boxes)

☐ Drinking Water ☐ Groundwater ☐ Surface Water ☐ Wastewater
☐ Raw ☐ Water Treatment Plant (WTP) ☐ Distribution System ☐ Point of Use (POU)
☐ Treated (circle one): Chlorinated / Chloraminated / Chlorine Dioxide / Ozonated / Peroxzone / Fluoridated / Coagulated / pH Adjusted

☐ Air Filters

Date/Time

☐ Seawater☐ Sludge (Semi-solid Samples)

Finishing: _____

☐ Milk☒ Soil/Sediment

Starting: _____

☐ Wipes☐ Biota (Type): _____Net (M³) _____☐ Radon Canister☐ Other: _____☐ Air Charcoal Cartridge

COMMENTS: (Cautions, etc.): _____

☐ Field Treatment: Preservatives added: _____ Iced/Frozen: _____ Other: _____
☐ Field Measurement: _____ mR/hr ☐ Radionuclide(s), if known: _____
☐ Rush/Priority (should be prearranged and have supervisory approval)

ANALYSIS REQUESTED (For questions, please call 510-620-2911)

☐ Gross Alpha ☐ Gross Beta ☐ Gamma Scan
☐ Total Uranium ☐ Total Beta (LSC) ☐ NORM (Gamma)
☐ Total Radium ☐ Tritium (³H) ☐ Isotopic Americium / Curium
☐ Radium-226 ☐ Carbon-14 ☐ Isotopic Plutonium
☐ Radium-228 ☐ Iodine-131 ☐ Isotopic Thorium
☐ Radon-222 ☐ Strontium-89, 90 ☐ Isotopic Uranium
☐ Other (Specify): _____ ☐ Nickel-63 ☐ Iron-55

CHAIN OF CUSTODY

1. Date _____ Name (Print) _____ Date _____
Time Custody Received _____ Organization _____ Signature _____ Time Custody Released _____
2. Date _____ Name (Print) _____ Date _____
Time Custody Received _____ Organization _____ Signature _____ Time Custody Released _____
3. Date 10-24-13 Name (Print) VA Date _____
Time Custody Received 11:00 Organization DWRLB Signature [Signature] Date _____
Time Custody Released _____

LABORATORY REMARKS (Leave Blank)

A. Condition at Time of Receipt:

☐ Acceptable ☐ Broken Container ☐ Leaked in Transit ☐ Improper Container
☐ Holding Time Exceeded ☐ Sample Not Cooled ☐ Insufficient Sample

B. Preservatives/Carriers:

☐ Added While Sampling ☐ Added in Laboratory ☐ Not Added ☐ Not Applicable



State of California - Health and Human Services Agency

California Department of Public Health

Drinking Water and Radiation Laboratory Branch

850 Marina Bay Parkway, Richmond, CA 94804

Phone: (510) 620-2911 Fax: (510) 620-2940



FINAL Analysis Results Report for Task ID. 13-0900

Investigator: J M S	DC REM	Requestor: Roger Lupo	RHB
San Louis Obisp CA		CDPH - RHB, 1500 Capitol Av., MS 7610	
Phone Number:		Sacramento CA 95814-5006	
		Phone Number: 916-440-7955	
Site/Project Name: San Onofre NPP / SONGS F / 4th Qtr 2013			
System No:	Billing Agency: RHB	Samples Received by Lab: 10/24/2013	

Parameter	Method	Result +/- CE	MDA 95	Units
Lab No: 13-0900-01	Sample ID: R 94057	Time Collected: 10/22/2013 13:01	Sampling Point: Songs F	
	Sample Type: Soil/Sediment			
Dry Wt/Wet Wt		0.770		
K-40	HASL Ga-01-R	14.5 +/- 0.337	0.310	pCi/g dry wt

- (1) Precision criteria for these method were determined to be acceptable.
- (2) CE is the counting error at the 95% confidence level as defined in Prescribed Procedures for Measurement of Radioactivity in Drinking Water, EPA-600/4-80-032, August 1980.
- (3) MDA95 is the sample specific minimum detectable activity at the 95% confidence level which is the LLD95 divided by 2.22, the efficiency, and the yield, and may include factors for abundance, decay, and ingrowth, dependent on the particular radionuclide. LLD95 is defined in section 7010G, Standard Methods for the Examination of Water and Wastewater, American Water Works Association, 21st Ed., 2005, where Sb is the square root of the instrument background count rate.

REQUEST FOR SAMPLE ANALYSIS (Radiochemical)

Drinking Water and Radiation Laboratory Branch

850 Marina Bay Parkway, G164
Richmond, CA 94804
510-620-2911

Date Received

10-24-13

Lab No. (Leave Blank)

13-0900

Date & Time Sampled

10-22-13 13:01

Serial Number

R 94057

Collector Information

Name:

Dept./Branch:

Address:

Telephone No.:

Sample Information

System Name / Facility:

Sampling Point (s):

System No.:

Reporting Information

Name:

Dept./Branch:

Address:

Telephone No.:

Billing Agency

☐ DWFOB ()☐ RHB☐ RWQCB ()☐ DTSC☐ DWTPB☐ FDB☐ DWR☐ CDFG☐ EMB☐ Other (Specify) _____

TYPE OF SAMPLE (Check all applicable boxes)

☐ Drinking Water☐ Groundwater☐ Surface Water☐ Wastewater☐ Raw☐ Water Treatment Plant (WTP)☐ Distribution System☐ Point of Use (POU)☐ Treated (circle one): Chlorinated / Chloraminated / Chlorine Dioxide / Ozonated / Peroxzone / Fluoridated / Coagulated / pH Adjusted☐ Air Filters

Date/Time

☐ Seawater☒ Sludge (Semi-solid Samples)

Finishing:

☐ Milk☒ Soil/Sediment

Starting:

☐ Wipes☐ Biota (Type): _____Net (M³)☐ Radon Canister☐ Other: _____☐ Air Charcoal Cartridge

COMMENTS: (Cautions, etc.):

☐ Field Treatment: Preservatives added: _____

Iced/Frozen: _____

Other: _____

☐ Field Measurement: _____ mR/hr☐ Radionuclide(s), if known: _____☐ Rush/Priority (should be prearranged and have supervisory approval)

ANALYSIS REQUESTED (For questions, please call 510-620-2911)

☐ Gross Alpha☐ Gross Beta☐ Gamma Scan☐ Total Uranium☐ Total Beta (LSC)☐ NORM (Gamma)☐ Total Radium☐ Tritium (³H)☐ Isotopic Americium / Curium☐ Radium-226☐ Carbon-14☐ Isotopic Plutonium☐ Radium-228☐ Iodine-131☐ Isotopic Thorium☐ Radon-222☐ Strontium-89, 90☐ Isotopic Uranium☐ Other (Specify): _____☐ Nickel-63☐ Iron-55

CHAIN OF CUSTODY

1.

Date

Name (Print)

Date

Time Custody Received

Organization

Signature

Time Custody Released

2.

Date

Name (Print)

Date

Time Custody Received

Organization

Signature

Time Custody Released

3.

Date

Name (Print)

Date

Time Custody Received

Organization

Signature

Time Custody Released

LABORATORY REMARKS (Leave Blank)

A. Condition at Time of Receipt:

☐ Acceptable☐ Broken Container☐ Leaked in Transit☐ Improper Container☐ Holding Time Exceeded☐ Sample Not Cooled☐ Insufficient Sample

B. Preservatives/Carriers:

☐ Added While Sampling☐ Added in Laboratory☐ Not Added☐ Not Applicable



State of California - Health and Human Services Agency

California Department of Public Health

Drinking Water and Radiation Laboratory Branch

850 Marina Bay Parkway, Richmond, CA 94804

Phone: (510) 620-2911 Fax: (510) 620-2940



FINAL Analysis Results Report for Task ID. 13-0859

Investigator: RHM	RHB	Requestor: Roger Lupo	RHB
SAN ONOFRE	CA	CDPH - RHB, 1500 Capitol Av., MS 7610	
Phone Number:		Sacramento CA 95814-5006	
Site/Project Name: San Onofre NPP / 4th Qtr 2013		Phone Number: 916-440-7955	
System No:	Billing Agency: RHB	Samples Received by Lab: 10/10/2013	

Parameter	Method	Result +/- CE	MDA 95	Units
Lab No: 13-0859-01	Sample ID: R 94039 Sample Type: Soil/Sediment	Time Collected: 10/8/2013 09:25	Sampling Point: Sediment, SONGS E	
Dry Wt/Wet Wt		0.7694		
K-40	HASL Ga-01-R	18.4 +/- 0.413	0.255	pCi/g dry wt

- (1) Precision criteria for these method were determined to be acceptable.
- (2) CE is the counting error at the 95% confidence level as defined in Prescribed Procedures for Measurement of Radioactivity in Drinking Water, EPA-600/4-80-032, August 1980.
- (3) MDA95 is the sample specific minimum detectable activity at the 95% confidence level which is the LLD95 divided by 2.22, the efficiency, and the yield, and may include factors for abundance, decay, and ingrowth, dependent on the particular radio-nuclide. LLD95 is defined in section 7010G, Standard Methods for the Examination of Water and Wastewater, American Water Works Association, 21st Ed., 2005, where Sb is the square root of the instrument background count rate.

REQUEST FOR SAMPLE ANALYSIS (Radiochemical)

Drinking Water and Radiation Laboratory Branch

850 Marina Bay Parkway, G164
Richmond, CA 94804
510-620-2911

Date Received

10-10-13

Lab No. (Leave Blank)

13-0859

Date & Time Sampled

10-8-13 9:25

Serial Number

R 94039

Collector Information

Name:
Dept./Branch:
Address:

RHM

Telephone No.:

Reporting Information

Name:
Dept./Branch:
Address:

Telephone No.:

Sample Information

System Name / Facility:
Sampling Point (s):

Songp E

System No.:

Billing Agency

☐ DWFOB () ☐ RHB ☐ RWQCB () ☐ DTSC
☐ DWTPB ☐ FDB ☐ DWR ☐ CDFG
☐ EMB ☐ Other (Specify) _____

TYPE OF SAMPLE (Check all applicable boxes)

- ☐ Drinking Water ☐ Groundwater ☐ Surface Water ☐ Wastewater
☐ Raw ☐ Water Treatment Plant (WTP) ☐ Distribution System ☐ Point of Use (POU)
☐ Treated (circle one): Chlorinated / Chloraminated / Chlorine Dioxide / Ozonated / Peroxzone / Fluoridated / Coagulated / pH Adjusted

- ☐ Air Filters ☐ Seawater ☐ Sludge (Semi-solid Samples)
Finishing: _____ Date/Time _____
Starting: _____
Net (M³) _____
☐ Air Charcoal Cartridge ☐ Milk ☒ Soil/Sediment
☐ Wipes ☐ Biota (Type): _____
☐ Radon Canister ☐ Other: _____

COMMENTS: (Cautions, etc.):

- ☐ Field Treatment: Preservatives added: _____ Iced/Frozen: _____ Other: _____
☐ Field Measurement: _____ mR/hr ☐ Radionuclide(s), if known: _____
☐ Rush/Priority (should be prearranged and have supervisory approval)

ANALYSIS REQUESTED (For questions, please call 510-620-2911)

- ☐ Gross Alpha ☐ Gross Beta ☐ Gamma Scan
☐ Total Uranium ☐ Total Beta (LSC) ☐ NORM (Gamma)
☐ Total Radium ☐ Tritium (³H) ☐ Isotopic Americium / Curium
☐ Radium-226 ☐ Carbon-14 ☐ Isotopic Plutonium
☐ Radium-228 ☐ Iodine-131 ☐ Isotopic Thorium
☐ Radon-222 ☐ Strontium-89, 90 ☐ Isotopic Uranium
☐ Other (Specify): _____ ☐ Nickel-63 ☐ Iron-55

CHAIN OF CUSTODY

1. Date _____ Name (Print) _____ Date _____
Time Custody Received _____ Organization _____ Signature _____ Time Custody Released _____
2. Date _____ Name (Print) _____ Date _____
Time Custody Received _____ Organization _____ Signature _____ Time Custody Released _____
3. Date 10-10-13 Name (Print) UA Date _____
Time Custody Received 15:45 Organization DWRLB Signature _____ Time Custody Released _____

LABORATORY REMARKS (Leave Blank)

A. Condition at Time of Receipt:

- ☐ Acceptable ☐ Broken Container ☐ Leaked in Transit ☐ Improper Container
☐ Holding Time Exceeded ☐ Sample Not Cooled ☐ Insufficient Sample

B. Preservatives/Carriers:

- ☐ Added While Sampling ☐ Added in Laboratory ☐ Not Added ☐ Not Applicable



State of California - Health and Human Services Agency

California Department of Public Health

Drinking Water and Radiation Laboratory Branch

850 Marina Bay Parkway, Richmond, CA 94804

Phone: (510) 620-2911 Fax: (510) 620-2940



FINAL Analysis Results Report for Task ID. 13-0687

Investigator: Kathleen Harkness	RHB	Requestor: Roger Lupo	RHB
500 S. Kraemer # 235,		CDPH - RHB, 1500 Capitol Av., MS 7610	
Brea	CA 92821	Sacramento	CA 95814-5006
Phone Number: 714 524-1816		Phone Number: 916-440-7955	
Site/Project Name: San Onofre NPP / Beach Sand / 3rd Qtr 2013			
System No:	Billing Agency: RHB	Samples Received by Lab: 9/11/2013	

Parameter	Method	Result +/- CE	MDA 95	Units
Lab No: 13-0687-01	Sample ID: R 91824	Time Collected: 9/5/2013	17:50	Sampling Point: Sediment / Loc #1 U-3 SE
	Sample Type: Soil/Sediment			
Dry Wt/Wet Wt		0.953		
K-40	HASL Ga-01-R	13.0 +/- 0.293	0.187	pCi/g dry wt

- (1) Precision criteria for these method were determined to be acceptable.
- (2) CE is the counting error at the 95% confidence level as defined in Prescribed Procedures for Measurement of Radioactivity in Drinking Water, EPA-600/4-80-032, August 1980.
- (3) MDA95 is the sample specific minimum detectable activity at the 95% confidence level which is the LLD95 divided by 2.22, the efficiency, and the yield, and may include factors for abundance, decay, and ingrowth, dependent on the particular radio-nuclide. LLD95 is defined in section 7010G, Standard Methods for the Examination of Water and Wastewater, American Water Works Association, 21st Ed., 2005, where Sb is the square root of the instrument background count rate.

REQUEST FOR SAMPLE ANALYSIS (Radiochemical)

Sanitation and Radiation Laboratories Branch 850 Marina Bay Parkway, G164 Richmond, CA 94804 510-620-2911	Date Received 9-11-13	Lab No. (Leave Blank) 13-0687
	Date & Time Sampled 9/15/2013 - 1750	Serial Number R 91824
Collector Information Name: K. Harkness Dept./Branch: RHB - Brea Address: Telephone No.: (714) 524-1816	Reporting Information Name: Roger Lupo Dept./Branch: RHB - Sacramento, CA Address: Telephone No.: (916) 440-7955	
Sample Information System Name / Facility: SONGS SEDIMENT Sampling Point (s): Beach Sand System No.: LOC. #1 U-3 SE	Billing Agency <input type="checkbox"/> DWFOB () <input checked="" type="checkbox"/> RHB <input type="checkbox"/> RWQCB () <input type="checkbox"/> DTSC <input type="checkbox"/> DWTPB <input type="checkbox"/> FDB <input type="checkbox"/> DWR <input type="checkbox"/> CDFG <input type="checkbox"/> EMB <input type="checkbox"/> Other (Specify) _____	

TYPE OF SAMPLE (Check all applicable boxes)

- ☐ Drinking Water ☐ Groundwater ☐ Surface Water ☐ Wastewater
☐ Raw ☐ Water Treatment Plant (WTP) ☐ Distribution System ☐ Point of Use (POU)
- ☐ Treated (circle one): Chlorinated / Chloraminated / Chlorine Dioxide / Ozonated / Peroxzone / Fluoridated / Coagulated / pH Adjusted
- ☐ Air Filters Date/Time _____ ☐ Seawater ☐ Sludge (Semi-solid Samples)
 Finishing: _____ ☐ Milk ☒ Soil/Sediment
 Starting: _____ ☐ Wipes ☐ Biota (Type): _____
 Net (M³) _____ ☐ Radon Canister ☐ Other: _____
- ☐ Air Charcoal Cartridge

COMMENTS: (Cautions, etc.):

- ☐ Field Treatment: Preservatives added: _____ Iced/Frozen: _____ Other: _____
☐ Field Measurement: _____ mR/hr ☐ Radionuclide(s), if known: _____
☐ Rush/Priority (should be prearranged and have supervisory approval)

ANALYSIS REQUESTED (For questions, please call 510-620-2911)

- ☐ Gross Alpha ☐ Gross Beta ☒ Gamma Scan
☐ Total Uranium ☐ Total Beta (LSC) ☐ NORM (Gamma)
☐ Total Radium ☐ Tritium (³H) ☐ Isotopic Americium / Curium
☐ Radium-226 ☐ Carbon-14 ☐ Isotopic Plutonium
☐ Radium-228 ☐ Iodine-131 ☐ Isotopic Thorium
☐ Radon-222 ☐ Strontium-89, 90 ☐ Isotopic Uranium
☐ Other (Specify): _____ ☐ Nickel-63 ☐ Iron-55

CHAIN OF CUSTODY

- | | | | | |
|----|--|---|------------------------------|--|
| 1. | Date 9/15/2013
Time Custody Received 1750 | Name (Print) K. Harkness
Organization RHB - Brea | Signature K. Harkness | Date 9/16/2013
Time Custody Released 5 pm |
| 2. | Date _____
Time Custody Received _____ | Name (Print) _____
Organization _____ | Signature _____ | Date _____
Time Custody Released _____ |
| 3. | Date 9-11-13
Time Custody Received 1750 | Name (Print) UA
Organization DWR/B | Signature [Signature] | Date _____
Time Custody Released _____ |

LABORATORY REMARKS (Leave Blank)

- A. Condition at Time of Receipt:**
☐ Acceptable ☐ Broken Container ☐ Leaked-in Transit ☐ Improper Container
☐ Holding Time Exceeded ☐ Sample Not Cooled ☐ Insufficient Sample
- B. Preservatives/Carriers:**
☐ Added While Sampling ☐ Added in Laboratory ☐ Not Added ☐ Not Applicable



State of California - Health and Human Services Agency

California Department of Public Health

Drinking Water and Radiation Laboratory Branch

850 Marina Bay Parkway, Richmond, CA 94804

Phone: (510) 620-2911 Fax: (510) 620-2940



FINAL Analysis Results Report for Task ID. 13-0688

Investigator: Kathleen Harkness	RHB	Requestor: Roger Lupo	RHB
500 S. Kraemer # 235,		CDPH - RHB, 1500 Capitol Av., MS 7610	
Brea	CA 92821	Sacramento	CA 95814-5006
Phone Number: 714 524-1816		Phone Number: 916-440-7955	
Site/Project Name: San Onofre NPP / Beach Sand / 3rd Qtr 2013			
System No:	Billing Agency: RHB	Samples Received by Lab: 9/11/2013	

Parameter	Method	Result +/- CE	MDA 95	Units
Lab No: 13-0688-01	Sample ID: R 91826 Sample Type: Soil/Sediment	Time Collected: 9/5/2013 17:15	Sampling Point: Sediment / #2 Old Man's Beach	
Dry Wt/Wet Wt		0.8756		
K-40	HASL Ga-01-R	16.8 +/- 0.366	0.242	pCi/g dry wt

- (1) Precision criteria for these method were determined to be acceptable.
- (2) CE is the counting error at the 95% confidence level as defined in Prescribed Procedures for Measurement of Radioactivity in Drinking Water, EPA-600/4-80-032, August 1980.
- (3) MDA95 is the sample specific minimum detectable activity at the 95% confidence level which is the LLD95 divided by 2.22, the efficiency, and the yield, and may include factors for abundance, decay, and ingrowth, dependent on the particular radio-nuclide. LLD95 is defined in section 7010G, Standard Methods for the Examination of Water and Wastewater, American Water Works Association, 21st Ed., 2005, where Sb is the square root of the instrument background count rate.

REQUEST FOR SAMPLE ANALYSIS (Radiochemical)

Sanitation and Radiation Laboratories Branch 850 Marina Bay Parkway, G164 Richmond, CA 94804 510-620-2911	Date Received 9-11-13	Lab No. (Leave Blank) 13-0688
	Date & Time Sampled 9/5/2013 @ 1715	Serial Number R 91826
Collector Information Name: K. HARKNESS Dept./Branch: RHB - Brea Address: Telephone No.: (714) 524-1816	Reporting Information Name: Roger Lupo Dept./Branch: RHB - Sacramento Address: Telephone No.: (916) 440-7955	
Sample Information System Name / Facility: SONGS Sediment Sampling Point (s): Beach Sand System No.: #2 - Old Man's Beach	Billing Agency <input type="checkbox"/> DWFOB () <input checked="" type="checkbox"/> RHB <input type="checkbox"/> RWQCB () <input type="checkbox"/> DTSC <input type="checkbox"/> DWTPB <input type="checkbox"/> FDB <input type="checkbox"/> DWR <input type="checkbox"/> CDFG <input type="checkbox"/> EMB <input type="checkbox"/> Other (Specify) _____	

TYPE OF SAMPLE (Check all applicable boxes)

- ☐ Drinking Water ☐ Groundwater ☐ Surface Water ☐ Wastewater
☐ Raw ☐ Water Treatment Plant (WTP) ☐ Distribution System ☐ Point of Use (POU)
☐ Treated (circle one): Chlorinated / Chloraminated / Chlorine Dioxide / Ozonated / Peroxzone / Fluoridated / Coagulated / pH Adjusted
- ☐ Air Filters _____ Date/Time _____ ☐ Seawater ☐ Sludge (Semi-solid Samples)
☐ Finishing: _____ ☐ Milk ☒ Soil/Sediment
☐ Starting: _____ ☐ Wipes ☐ Biota (Type): _____
☐ Net (M³) _____ ☐ Radon Canister ☐ Other: _____
☐ Air Charcoal Cartridge

COMMENTS: (Cautions, etc.):

- ☐ Field Treatment: Preservatives added: _____ Iced/Frozen: _____ Other: _____
☐ Field Measurement: _____ mR/hr ☐ Radionuclide(s), if known: _____
☐ Rush/Priority (should be prearranged and have supervisory approval)

ANALYSIS REQUESTED (For questions, please call 510-620-2911)

- ☐ Gross Alpha ☐ Gross Beta ☒ Gamma Scan
☐ Total Uranium ☐ Total Beta (TSC) ☐ NORM (Gamma)
☐ Total Radium ☐ Tritium (T₂H) ☐ Isotopic Americium / Curium
☐ Radium-226 ☐ Carbon-14 ☐ Isotopic Plutonium
☐ Radium-228 ☐ Iodine-131 ☐ Isotopic Thorium
☐ Radon-222 ☐ Strontium-89, 90 ☐ Isotopic Uranium
☐ Other (Specify): _____ ☐ Nickel-63 ☐ Iron-55

CHAIN OF CUSTODY

- | | | | | |
|----|--------------------------------|-----------------------------|----------------------------|-----------------------|
| 1. | Date
9/5/2013 | Name (Print)
K. Harkness | Signature
K. Harkness | Date
9-6-2013 |
| | Time Custody Received
1715 | Organization
RHB - Brea | | Date
5 pm |
| 2. | Date | Name (Print) | Signature | Date |
| | Time Custody Received | Organization | | Time Custody Released |
| 3. | Date
9-11-13 | Name (Print)
VA | Signature
Victor M. Ali | Date |
| | Time Custody Received
14:00 | Organization
DURLB | Signature | Time Custody Released |

LABORATORY REMARKS (Leave Blank)

- A. Condition at Time of Receipt:**
☐ Acceptable ☐ Broken Container ☐ Leaked in Transit ☐ Improper Container
☐ Holding Time Exceeded ☐ Sample Not Cooled ☒ Insufficient Sample
- B. Preservatives/Carriers:**
☐ Added While Sampling ☐ Added in Laboratory ☐ Not Added ☐ Not Applicable



State of California - Health and Human Services Agency

California Department of Public Health

Drinking Water and Radiation Laboratory Branch

850 Marina Bay Parkway, Richmond, CA 94804

Phone: (510) 620-2911 Fax: (510) 620-2940



FINAL Analysis Results Report for Task ID. 13-0690

Investigator: Kathleen Harkness	RHB	Requestor: Roger Lupo	RHB
500 S. Kraemer # 235,		CDPH - RHB, 1500 Capitol Av., MS 7610	
Brea	CA 92821	Sacramento	CA 95814-5006
Phone Number: 714 524-1816		Phone Number: 916-440-7955	
Site/Project Name: San Onofre NPP / Beach Sand / Control #4 Newport Beach			
System No:	Billing Agency: RHB	Samples Received by Lab: 9/11/2013	

Parameter	Method	Result +/- CE	MDA 95	Units
Lab No: 13-0690-01	Sample ID: R 91825	Time Collected: 9/5/2013	14:30	Sampling Point: Sediment
	Sample Type: Soil/Sediment			
Dry Wt/Wet Wt		0.9837		
K-40	HASL Ga-01-R	16.2 +/- 0.361	0.291	pCi/g dry wt

- (1) Precision criteria for these method were determined to be acceptable.
- (2) CE is the counting error at the 95% confidence level as defined in Prescribed Procedures for Measurement of Radioactivity in Drinking Water, EPA-600/4-80-032, August 1980.
- (3) MDA95 is the sample specific minimum detectable activity at the 95% confidence level which is the LLD95 divided by 2.22, the efficiency, and the yield, and may include factors for abundance, decay, and ingrowth, dependent on the particular radionuclide. LLD95 is defined in section 7010G, Standard Methods for the Examination of Water and Wastewater, American Water Works Association, 21st Ed., 2005, where Sb is the square root of the instrument background count rate.

REQUEST FOR SAMPLE ANALYSIS (Radiochemical)

Sanitation and Radiation Laboratories Branch 850 Marina Bay Parkway, G164 Richmond, CA 94804 510-620-2911	Date Received 9-11-13	Lab No. (Leave Blank) 13-0690
	Date & Time Sampled 9/15/2013 - 1430	Serial Number R 91825
Collector Information Name: K. Harkness Dept./Branch: RHB - Brea Address: Telephone No.: (714) 524-1816	Reporting Information Name: Roger Lupo Dept./Branch: RHB - Sacramento, CA Address: Telephone No.: (916) 440-7955	
Sample Information System Name / Facility: SONGS SEDIMENT Sampling Point (s): Beach Sand NB Beach System No.: Loc. #4	Billing Agency <input checked="" type="checkbox"/> DWFQB () <input checked="" type="checkbox"/> RHB <input type="checkbox"/> RWQCB () <input type="checkbox"/> DTSC <input checked="" type="checkbox"/> DWTPB <input type="checkbox"/> FDB <input type="checkbox"/> DWR <input type="checkbox"/> CDFG <input type="checkbox"/> EMB <input type="checkbox"/> Other (Specify) _____	

TYPE OF SAMPLE (Check all applicable boxes)

- ☐ Drinking Water ☐ Groundwater ☐ Surface Water ☐ Wastewater
☐ Raw ☐ Water Treatment Plant (WTP) ☐ Distribution System ☐ Point of Use (POU)
☐ Treated (circle one): Chlorinated / Chloraminated / Chlorine Dioxide / Ozonated / Peroxzone / Fluoridated / Coagulated / pH Adjusted
- ☐ Air Filters Date/Time _____ ☒ Seawater ☐ Sludge (Semi-solid Samples)
 Finishing: _____ ☐ Milk ☒ Soil/Sediment
 Starting: _____ ☐ Wipes ☐ Biota (Type): _____
 Net (M³) _____ ☒ Radon Canister ☐ Other: _____
☐ Air Charcoal Cartridge

COMMENTS: (Cautions, etc.):

- ☐ Field Treatment: Preservatives added: _____ Iced/Frozen: _____ Other: _____
☐ Field Measurement: _____ mR/hr ☐ Radionuclide(s), if known: _____
☐ Rush/Priority (should be prearranged and have supervisory approval)

ANALYSIS REQUESTED (For questions, please call 510-620-2911)

- ☐ Gross Alpha ☐ Gross Beta ☒ Gamma Scan
☐ Total Uranium ☐ Total Beta (BSC) ☐ NORM (Gamma)
☐ Total Radium ☐ Tritium (³H) ☐ Isotopic Americium / Curium
☐ Radium-226 ☐ Carbon-14 ☐ Isotopic Plutonium
☐ Radium-228 ☐ Iodine-131 ☐ Isotopic Thorium
☐ Radon-222 ☐ Strontium-89, 90 ☐ Isotopic Uranium
☐ Other (Specify): _____ ☐ Nickel-63 ☐ Iron-55

CHAIN OF CUSTODY

- | | | | | |
|----|--|---|-------------------------------------|--|
| 1. | Date
9/15/2013
Time Custody Received
1430 | Name (Print)
K. Harkness
Organization
RHB - Brea | Signature
<i>K. Harkness</i> | Date
9/16/2013
Time Custody Released
5 pm |
| 2. | Date
Time Custody Received | Name (Print)
Organization | Signature | Date
Time Custody Released |
| 3. | Date
9-11-13
Time Custody Received
14:00 | Name (Print)
VA
Organization
DWRIB | Signature
<i>Victoria M. Ali</i> | Date
Time Custody Released |

LABORATORY REMARKS (Leave Blank)

- A. Condition at Time of Receipt:**
☐ Acceptable ☐ Broken Container ☐ Leaked in Transit ☐ Improper Container
☐ Holding Time Exceeded ☐ Sample Not Cooled ☒ Insufficient Sample
- B. Preservatives/Carriers:**
☐ Added While Sampling ☐ Added in Laboratory ☒ Not Added ☐ Not Applicable



State of California - Health and Human Services Agency
California Department of Public Health

Drinking Water and Radiation Laboratory Branch

850 Marina Bay Parkway, Richmond, CA 94804
Phone: (510) 620-2911 Fax: (510) 620-2940



FINAL Analysis Results Report for Task ID. 13-0717

Investigator: K. HARKNESS 1800 E. LAMBERT, STE 125 BREA CA 92821 Phone Number: 714-257-2041	Requestor: Roger Lupo CDPH - RHB, 1500 Capitol Av., MS 7610 Sacramento CA 95814-5006 Phone Number: 916-440-7955
Site/Project Name: San Onofre NPP / REMP Soils	
System No:	Billing Agency: RHB
Samples Received by Lab: 9/24/2013	

Parameter	Method	Result +/- CE	MDA 95	Units
Lab No: 13-0717-01	Sample ID: R 91821	Time Collected: 9/18/2013 12:40	Sampling Point: #7, Control	Oceanside
	Sample Type: Soil/Sediment			
Dry Wt/Wet Wt		0.994		
K-40	HASL Ga-01-R	3.43 +/- 0.107	0.255	pCi/g dry wt



- (1) Precision criteria for these method were determined to be acceptable.
- (2) CE is the counting error at the 95% confidence level as defined in Prescribed Procedures for Measurement of Radioactivity in Drinking Water, EPA-600/4-80-032, August 1980.
- (3) MDA95 is the sample specific minimum detectable activity at the 95% confidence level which is the LLD95 divided by 2.22, the efficiency, and the yield, and may include factors for abundance, decay, and ingrowth, dependent on the particular radio-nuclide. LLD95 is defined in section 7010G, Standard Methods for the Examination of Water and Wastewater, American Water Works Association, 21st Ed., 2005, where Sb is the square root of the instrument background count rate.

REQUEST FOR SAMPLE ANALYSIS (Radiochemical)

Sanitation and Radiation Laboratories Branch 850 Marina Bay Parkway, G164 Richmond, CA 94804 510-620-2911	Date Received 9-24-13	Lab No. (Leave Blank) 13-0717
	Date & Time Sampled 9/18/13 1240	Serial Number R 91821
Collector Information Name: K. Harkness Dept./Branch: RHB-ICE Address: (714) 584-1816 Telephone No.: (714) 584-1816	Reporting Information Name: Roger Lupo Dept./Branch: RHB-KAU Address: 916-440-7995 Telephone No.: 916-440-7995	
Sample Information System Name / Facility: SONGS REMP Sampling Point (s): SOILS #7-Control System No.: Prince of Peace Abbey D'side	Billing Agency <input type="checkbox"/> DWFOB () <input checked="" type="checkbox"/> RHB <input type="checkbox"/> RWQCB () <input type="checkbox"/> DTSC <input type="checkbox"/> DWTPB <input type="checkbox"/> FDB <input type="checkbox"/> DWR <input type="checkbox"/> CDFG <input type="checkbox"/> EMB <input type="checkbox"/> Other (Specify) _____	

TYPE OF SAMPLE (Check all applicable boxes)

- oceanside, CA
- ☐ Drinking Water ☐ Groundwater ☐ Surface Water ☐ Wastewater
☐ Raw ☐ Water Treatment Plant (WTP) ☐ Distribution System ☐ Point of Use (POU)
☐ Treated (circle one): Chlorinated / Chloraminated / Chlorine Dioxide / Ozonated / Peroxzone / Fluoridated / Coagulated / pH Adjusted
- ☐ Air Filters ☐ Seawater ☐ Sludge (Semi-solid Samples)
 Finishing: _____ Date/Time: _____ ☐ Milk ☒ Soil/Sediment
 Starting: _____ ☐ Wipes ☐ Biota (Type): _____
 Net (M³) _____ ☐ Radon Canister ☐ Other: _____
☐ Air Charcoal Cartridge

COMMENTS: (Cautions, etc.):

- ☐ Field Treatment: Preservatives added: _____ Iced/Frozen: _____ Other: _____
☐ Field Measurement: _____ mR/hr ☐ Radionuclide(s), if known: _____
☐ Rush/Priority (should be prearranged and have supervisory approval)

ANALYSIS REQUESTED (For questions, please call 510-620-2911)

- ☐ Gross Alpha ☐ Gross Beta ☒ Gamma Scan
☐ Total Uranium ☐ Total Beta (LSC) ☐ NORM (Gamma)
☐ Total Radium ☐ Tritium (³H) ☐ Isotopic Americium / Curium
☐ Radium-226 ☐ Carbon-14 ☐ Isotopic Plutonium
☐ Radium-228 ☐ Iodine-131 ☐ Isotopic Thorium
☐ Radon-222 ☐ Strontium-89, 90 ☐ Isotopic Uranium
☐ Other (Specify): _____ ☐ Nickel-63 ☐ Iron-55

CHAIN OF CUSTODY

- | | | | | |
|----|--------------------------------|-----------------------------|--------------------------|-----------------------------------|
| 1. | Date
9/18/13 1240 | Name (Print)
K. Harkness | Signature
K. Harkness | Date
9/19/13 |
| | Time Custody Received | Organization
RHB-ICE | | Time Custody Released
4pm mail |
| 2. | Date | Name (Print) | Signature | Date |
| | Time Custody Received | Organization | | Time Custody Released |
| 3. | Date
9-24-13 | Name (Print)
VA | Signature
[Signature] | Date |
| | Time Custody Received
14:00 | Organization
DWR/LB | Signature | Time Custody Released |

LABORATORY REMARKS (Leave Blank)

- A. Condition at Time of Receipt:**
☐ Acceptable ☐ Broken Container ☐ Leaked in Transit ☐ Improper Container
☐ Holding Time Exceeded ☐ Sample Not Cooled ☐ Insufficient Sample
- B. Preservatives/Carriers:**
☐ Added While Sampling ☐ Added in Laboratory ☐ Not Added ☐ Not Applicable
- ≤ 0.01 uCi/HK



State of California - Health and Human Services Agency

California Department of Public Health

Drinking Water and Radiation Laboratory Branch

850 Marina Bay Parkway, Richmond, CA 94804

Phone: (510) 620-2911 Fax: (510) 620-2940



FINAL Analysis Results Report for Task ID. 13-0718

Investigator: K. HARKNESS	RHB	Requestor: Roger Lupo	RHB
1800 E. LAMBERT, STE 125		CDPH - RHB, 1500 Capitol Av., MS 7610	
BREA	CA 92821	Sacramento	CA 95814-5006
Phone Number: 714-257-2041		Phone Number: 916-440-7955	
Site/Project Name: San Onofre NPP / REMP Soil			
System No:	Billing Agency: RHB	Samples Received by Lab: 9/24/2013	

Parameter	Method	Result +/- CE	MDA 95	Units
Lab No: 13-0718-01	Sample ID: R 91827	Time Collected: 9/18/2013 11:20	Sampling Point: #1, Camp San Onofre	
	Sample Type: Soil/Sediment			
Dry Wt/Wet Wt		1.000		
K-40	HASL Ga-01-R	22.6 +/- 0.506	0.298	pCi/g dry wt



- (1) Precision criteria for these method were determined to be acceptable.
- (2) CE is the counting error at the 95% confidence level as defined in Prescribed Procedures for Measurement of Radioactivity in Drinking Water, EPA-600/4-80-032, August 1980.
- (3) MDA95 is the sample specific minimum detectable activity at the 95% confidence level which is the LLD95 divided by 2.22, the efficiency, and the yield, and may include factors for abundance, decay, and ingrowth, dependent on the particular radio-nuclide. LLD95 is defined in section 7010G, Standard Methods for the Examination of Water and Wastewater, American Water Works Association, 21st Ed., 2005, where Sb is the square root of the instrument background count rate.

REQUEST FOR SAMPLE ANALYSIS (Radiochemical)

Sanitation and Radiation Laboratories Branch 850 Marina Bay Parkway, G164 Richmond, CA 94804 510-620-2911	Date Received 9-24-13	Lab No. (Leave Blank) 13-0718
	Date & Time Sampled 9/18/2013 1120	Serial Number R 91827
Collector Information Name: K Harkness Dept./Branch: RHB-ICE Address: Telephone No.: 714 524-1816	Reporting Information Name: Roger Lupo Dept./Branch: RHB-RAU Address: Telephone No.: (916) 440-7955	
Sample Information System Name / Facility: SONGS Rem P Sampling Point (s): SOILS #1 System No.: Camp San Onofre	Billing Agency <input type="checkbox"/> DWFOB () <input checked="" type="checkbox"/> RHB <input type="checkbox"/> RWQCB () <input type="checkbox"/> DTSC <input type="checkbox"/> DWTPB <input type="checkbox"/> FDB <input type="checkbox"/> DWR <input type="checkbox"/> CDFG <input type="checkbox"/> EMB <input type="checkbox"/> Other (Specify) _____	

TYPE OF SAMPLE (Check all applicable boxes)

- ☐ Drinking Water ☐ Groundwater ☐ Surface Water ☐ Wastewater
☐ Raw ☐ Water Treatment Plant (WTP) ☐ Distribution System ☐ Point of Use (POU)
☐ Treated (circle one): Chlorinated / Chloraminated / Chlorine Dioxide / Ozonated / Peroxzone / Fluoridated / Coagulated / pH Adjusted
- ☐ Air Filters Date/Time ☐ Seawater ☐ Sludge (Semi-solid Samples)
 Finishing: _____ ☐ Milk ☒ Soil/Sediment
 Starting: _____ ☐ Wipes ☐ Biota (Type): _____
 Net (M³) _____ ☐ Radon Canister ☐ Other: _____
- ☐ Air Charcoal Cartridge

COMMENTS: (Cautions, etc.):

- ☐ Field Treatment: Preservatives added: _____ Iced/Frozen: _____ Other: _____
☐ Field Measurement: _____ mR/hr ☐ Radionuclide(s), if known: _____
☐ Rush/Priority (should be prearranged and have supervisory approval)

ANALYSIS REQUESTED (For questions, please call 510-620-2911)

- ☐ Gross Alpha ☐ Gross Beta ☒ Gamma Scan
☐ Total Uranium ☐ Total Beta (LSC) ☐ NORM (Gamma)
☐ Total Radium ☐ Tritium (³H) ☐ Isotopic Americium / Curium
☐ Radium-226 ☐ Carbon-14 ☐ Isotopic Plutonium
☐ Radium-228 ☐ Iodine-131 ☐ Isotopic Thorium
☐ Radon-222 ☐ Strontium-89, 90 ☐ Isotopic Uranium
☐ Other (Specify): _____ ☐ Nickel-63 ☐ Iron-55

CHAIN OF CUSTODY

- | | | | | |
|----|---|---|------------------------------|--|
| 1. | Date
9/18/13
Time Custody Received
1120 | Name (Print)
K HARKNESS
Organization
RHB-ICE | Signature
K Harkness | Date
9/19/2013
Time Custody Released
5pm MAIL |
| 2. | Date
Time Custody Received | Name (Print)
Organization | Signature | Date
Time Custody Released |
| 3. | Date
9-24-13
Time Custody Received
14:00 | Name (Print)
JA
Organization
DWR/13 | Signature
Victoria M. Qui | Date
Time Custody Released |

LABORATORY REMARKS (Leave Blank)

- A. Condition at Time of Receipt: 50.01 MC/HR
- ☐ Acceptable ☐ Broken Container ☐ Leaked in Transit ☐ Improper Container
☐ Holding Time Exceeded ☐ Sample Not Cooled ☐ Insufficient Sample
- B. Preservatives/Carriers:
- ☐ Added While Sampling ☐ Added in Laboratory ☐ Not Added ☐ Not Applicable



State of California - Health and Human Services Agency

California Department of Public Health

Drinking Water and Radiation Laboratory Branch

850 Marina Bay Parkway, Richmond, CA 94804

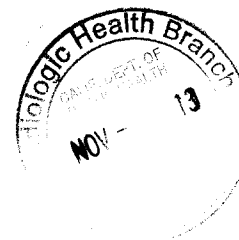
Phone: (510) 620-2911 Fax: (510) 620-2940



FINAL Analysis Results Report for Task ID. 13-0720

Investigator: K. HARKNESS	RHB	Requestor: Roger Lupo	RHB
1800 E. LAMBERT, STE 125		CDPH - RHB, 1500 Capitol Av., MS 7610	
BREA	CA 92821	Sacramento	CA 95814-5006
Phone Number: 714-257-2041		Phone Number: 916-440-7955	
Site/Project Name: San Onofre NPP			
System No:	Billing Agency: RHB	Samples Received by Lab: 9/24/2013	

Parameter	Method	Result +/- CE	MDA 95	Units
Lab No: 13-0720-01	Sample ID: R 91829	Time Collected: 9/18/2013 11:00	Sampling Point: #3, Basilone Rd.	
	Sample Type: Soil/Sediment		Camp Pendleton	
Dry Wt/Wet Wt		0.999		
K-40	HASL Ga-01-R	18.7 +/- 0.418	0.237	pCi/g dry wt



- (1) Precision criteria for these method were determined to be acceptable.
- (2) CE is the counting error at the 95% confidence level as defined in Prescribed Procedures for Measurement of Radioactivity in Drinking Water, EPA-600/4-80-032, August 1980.
- (3) MDA95 is the sample specific minimum detectable activity at the 95% confidence level which is the LLD95 divided by 2.22, the efficiency, and the yield, and may include factors for abundance, decay, and ingrowth, dependent on the particular radio-nuclide. LLD95 is defined in section 7010G, Standard Methods for the Examination of Water and Wastewater, American Water Works Association, 21st Ed., 2005, where Sb is the square root of the instrument background count rate.

REQUEST FOR SAMPLE ANALYSIS (Radiochemical)

Sanitation and Radiation Laboratories Branch 850 Marina Bay Parkway, G164 Richmond, CA 94804 510-620-2911	Date Received 9-24-13	Lab No. (Leave Blank) 13-0220
	Date & Time Sampled 9/18/13 1100	Serial Number R 91829
Collector Information Name: K. Harkness Dept./Branch: RHB-ICE Address: Telephone No.: (714) 524-1816	Reporting Information Name: Roger Lupo Dept./Branch: RHB-RAU Address: Telephone No.: (916) 446-7955	
Sample Information System Name / Facility: JONGS REMP Sampling Point (s): SOIL #3 System No.: Basilone Rd - Campton	Billing Agency <input type="checkbox"/> DWFOB () <input checked="" type="checkbox"/> RHB <input type="checkbox"/> RWQCB () <input type="checkbox"/> DTSC <input type="checkbox"/> DWTPB <input type="checkbox"/> FDB <input type="checkbox"/> DWR <input type="checkbox"/> CDFG <input type="checkbox"/> EMB <input type="checkbox"/> Other (Specify) _____	

TYPE OF SAMPLE (Check all applicable boxes)

- ☐ Drinking Water ☐ Groundwater ☐ Surface Water ☐ Wastewater
☐ Raw ☐ Water Treatment Plant (WTP) ☐ Distribution System ☐ Point of Use (POU)
☐ Treated (circle one): Chlorinated / Chloraminated / Chlorine Dioxide / Ozonated / Peroxzone / Fluoridated / Coagulated / pH Adjusted
- ☐ Air Filters Date/Time ☐ Seawater ☐ Sludge (Semi-solid Samples)
 Finishing: _____ ☐ Milk ☒ Soil/Sediment
 Starting: _____ ☐ Wipes ☐ Biota (Type): _____
 Net (M³) _____ ☐ Radon Canister ☐ Other: _____
- ☐ Air Charcoal Cartridge

COMMENTS: (Cautions, etc.):

- ☐ Field Treatment: Preservatives added: _____ Iced/Frozen: _____ Other: _____
☐ Field Measurement: _____ mR/hr ☐ Radionuclide(s), if known: _____
☐ Rush/Priority (should be prearranged and have supervisory approval)

ANALYSIS REQUESTED (For questions, please call 510-620-2911)

- ☐ Gross Alpha ☐ Gross Beta ☒ Gamma Scan
☐ Total Uranium ☐ Total Beta (LSC) ☐ NORM (Gamma)
☐ Total Radium ☐ Tritium (³H) ☐ Isotopic Americium / Curium
☐ Radium-226 ☐ Carbon-14 ☐ Isotopic Plutonium
☐ Radium-228 ☐ Iodine-131 ☐ Isotopic Thorium
☐ Radon-222 ☐ Strontium-89, 90 ☐ Isotopic Uranium
☐ Other (Specify): _____ ☐ Nickel-63 ☐ Iron-55

CHAIN OF CUSTODY

- | | | | | |
|----|---|--|--|---|
| 1. | Date
9/18/13
Time Custody Received
1100 | Name (Print)
K. Harkness
Organization
RHB-ICE | Signature
K. Harkness | Date
9/19/13
Time Custody Released
4pm mail |
| 2. | Date

Time Custody Received

Date

Time Custody Received

Date

Time Custody Received
_____ | Name (Print)

Organization

Name (Print)

Organization

Name (Print)

Organization
_____ | Signature

Signature

Signature

Signature
_____ | Date

Time Custody Released

Date

Time Custody Released

Date

Time Custody Released
_____ |
| 3. | Date
9-24-13
Time Custody Received
14:00 | Name (Print)
UA
Organization
DWR/RCB | Signature
D. Lupo | Date

Time Custody Released

Date

Time Custody Released
_____ |

LABORATORY REMARKS (Leave Blank)

- A. Condition at Time of Receipt: $\leq 0.01 \mu R / HR$
☐ Acceptable ☐ Broken Container ☐ Leaked in Transit ☐ Improper Container
☐ Holding Time Exceeded ☐ Sample Not Cooled ☐ Insufficient Sample
- B. Preservatives/Carriers:
☐ Added While Sampling ☐ Added in Laboratory ☐ Not Added ☐ Not Applicable



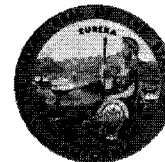
State of California - Health and Human Services Agency

California Department of Public Health

Drinking Water and Radiation Laboratory Branch

850 Marina Bay Parkway, Richmond, CA 94804

Phone: (510) 620-2911 Fax: (510) 620-2940



FINAL Analysis Results Report for Task ID. 13-0719

Investigator: K. HARKNESS	RHB	Requestor: Roger Lupo	RHB
1800 E. LAMBERT, STE 125		CDPH - RHB, 1500 Capitol Av., MS 7610	
BREA	CA 92821	Sacramento	CA 95814-5006
Phone Number: 714-257-2041		Phone Number: 916-440-7955	
Site/Project Name: San Onofre NPP / REMP Soil			
System No:	Billing Agency: RHB	Samples Received by Lab: 9/24/2013	

Parameter	Method	Result +/- CE	MDA 95	Units
Lab No: 13-0719-01	Sample ID: R 91828	Time Collected: 9/18/2013 10:20	Sampling Point: #2, Old Rte 101	
	Sample Type: Soil/Sediment		Campl Pendleton	
Dry Wt/Wet Wt		1.000		
K-40	HASL Ga-01-R	9.23 +/- 0.204	0.139	pCi/g dry wt



- (1) Precision criteria for these method were determined to be acceptable.
- (2) CE is the counting error at the 95% confidence level as defined in Prescribed Procedures for Measurement of Radioactivity in Drinking Water, EPA-600/4-80-032, August 1980.
- (3) MDA95 is the sample specific minimum detectable activity at the 95% confidence level which is the LLD95 divided by 2.22, the efficiency, and the yield, and may include factors for abundance, decay, and ingrowth, dependent on the particular radio-nuclide. LLD95 is defined in section 7010G, Standard Methods for the Examination of Water and Wastewater, American Water Works Association, 21st Ed., 2005, where Sb is the square root of the instrument background count rate.

REQUEST FOR SAMPLE ANALYSIS (Radiochemical)

Sanitation and Radiation Laboratories Branch 850 Marina Bay Parkway, G164 Richmond, CA 94804 510-620-2911	Date Received 9-24-13	Lab No. (Leave Blank) 13-0719
	Date & Time Sampled 9/18/13 1020	Serial Number R 91828
Collector Information Name: K. HARKNESS Dept./Branch: RHB-ICE Address: Telephone No.: (414) 524-1816	Reporting Information Name: Roger Lupo Dept./Branch: RHB-RAU Address: Telephone No.: (916) 440-7955	
Sample Information System Name / Facility: SONGS REMP Sampling Point (s): SOILS #2 System No.: Old Rte 101 in Camp Pendleton	Billing Agency <input type="checkbox"/> DWFOB () <input checked="" type="checkbox"/> RHB <input type="checkbox"/> RWQCB () <input type="checkbox"/> DTSC <input type="checkbox"/> DWTPB <input type="checkbox"/> FDB <input type="checkbox"/> DWR <input type="checkbox"/> CDFG <input type="checkbox"/> EMB <input type="checkbox"/> Other (Specify) _____	

TYPE OF SAMPLE (Check all applicable boxes)

- ☐ Drinking Water ☐ Groundwater ☐ Surface Water ☐ Wastewater
☐ Raw ☐ Water Treatment Plant (WTP) ☐ Distribution System ☐ Point of Use (POU)
☐ Treated (circle one): Chlorinated / Chloraminated / Chlorine Dioxide / Ozonated / Peroxzone / Fluoridated / Coagulated / pH Adjusted
- ☐ Air Filters ☐ Seawater ☐ Sludge (Semi-solid Samples)
 Finishing: _____ Date/Time: _____ ☐ Milk ☒ Soil/Sediment
 Starting: _____ ☐ Wipes ☐ Biota (Type): _____
 Net (M³) _____ ☐ Radon Canister ☐ Other: _____
☐ Air Charcoal Cartridge

COMMENTS: (Cautions, etc.):

- ☐ Field Treatment: Preservatives added: _____ Iced/Frozen: _____ Other: _____
☐ Field Measurement: _____ mR/hr ☐ Radionuclide(s), if known: _____
☐ Rush/Priority (should be prearranged and have supervisory approval)

ANALYSIS REQUESTED (For questions, please call 510-620-2911)

- ☐ Gross Alpha ☐ Gross Beta ☒ Gamma Scan
☐ Total Uranium ☐ Total Beta (LSC) ☐ NORM (Gamma)
☐ Total Radium ☐ Tritium (³H) ☐ Isotopic Americium / Curium
☐ Radium-226 ☐ Carbon-14 ☐ Isotopic Plutonium
☐ Radium-228 ☐ Iodine-131 ☐ Isotopic Thorium
☐ Radon-222 ☐ Strontium-89, 90 ☐ Isotopic Uranium
☐ Other (Specify): _____ ☐ Nickel-63 ☐ Iron-55

CHAIN OF CUSTODY

- | | | | | |
|----|--------------------------------|----------------------------|-----------------------------|------------------------------------|
| 1. | Date
9/18/13 | Name (Print)
K Harkness | Signature
K Harkness | Date
9/19/2013 |
| | Time Custody Received
1020 | Organization
RHB-ICE | | Time Custody Released
4 pm mail |
| 2. | Date | Name (Print) | Signature | Date |
| | Time Custody Received | Organization | | Time Custody Released |
| 3. | Date
9-24-13 | Name (Print)
VA | Signature
D. [Signature] | Date |
| | Time Custody Received
14:00 | Organization
DWRLB | | Time Custody Released |

LABORATORY REMARKS (Leave Blank)

- A. Condition at Time of Receipt:**
☐ Acceptable ☐ Broken Container ☐ Leaked in Transit ☐ Improper Container
☐ Holding Time Exceeded ☐ Sample Not Cooled ☐ Insufficient Sample
- B. Preservatives/Carriers:**
☐ Added While Sampling ☐ Added in Laboratory ☐ Not Added ☐ Not Applicable



State of California - Health and Human Services Agency

California Department of Public Health

Drinking Water and Radiation Laboratory Branch

850 Marina Bay Parkway, Richmond, CA 94804

Phone: (510) 620-2911 Fax: (510) 620-2940



FINAL Analysis Results Report for Task ID. 13-0716

Investigator: K. HARKNESS	RHB	Requestor: Roger Lupo	RHB
1800 E. LAMBERT, STE 125		CDPH - RHB, 1500 Capitol Av., MS 7610	
BREA	CA 92821	Sacramento	CA 95814-5006
Phone Number: 714-257-2041		Phone Number: 916-440-7955	
Site/Project Name: San Onofre NPP / REMP Soils			
System No:	Billing Agency: RHB	Samples Received by Lab: 9/24/2013	

Parameter	Method	Result +/- CE	MDA 95	Units
Lab No: 13-0716-01	Sample ID: R 91820	Time Collected: 9/18/2013 09:30	Sampling Point: #5, Near old	
	Sample Type: Soil/Sediment		visitors center	
Dry Wt/Wet Wt		1.000		
K-40	HASL Ga-01-R	14.9 +/- 0.336	0.277	pCi/g dry wt.



- (1) Precision criteria for these method were determined to be acceptable.
- (2) CE is the counting error at the 95% confidence level as defined in Prescribed Procedures for Measurement of Radioactivity in Drinking Water, EPA-600/4-80-032, August 1980.
- (3) MDA95 is the sample specific minimum detectable activity at the 95% confidence level which is the LLD95 divided by 2.22, the efficiency, and the yield, and may include factors for abundance, decay, and ingrowth, dependent on the particular radionuclide. LLD95 is defined in section 7010G, Standard Methods for the Examination of Water and Wastewater, American Water Works Association, 21st Ed., 2005, where Sb is the square root of the instrument background count rate.

REQUEST FOR SAMPLE ANALYSIS (Radiochemical)

Sanitation and Radiation Laboratories Branch 850 Marina Bay Parkway, G164 Richmond, CA 94804 510-620-2911	Date Received 9-24-13	Lab No. (Leave Blank) 15-0716
	Date & Time Sampled 9/18/13 0930	Serial Number R 91820
Collector Information Name: K. HARKNESS Dept./Branch: RHB-ICE Address: _____ Telephone No.: (714) 524-1816	Reporting Information Name: Roger Lupo Dept./Branch: RHB-RAU Address: _____ Telephone No.: (916) 440-7955	
Sample Information System Name / Facility: SONGS REMP Sampling Point (s): SOILS # 5 System No.: Near Old Visitors Center	Billing Agency <input type="checkbox"/> DWFOB () <input checked="" type="checkbox"/> RHB <input type="checkbox"/> RWQCB () <input type="checkbox"/> DTSC <input type="checkbox"/> DWTPB <input type="checkbox"/> FDB <input type="checkbox"/> DWR <input type="checkbox"/> CDFG <input type="checkbox"/> EMB <input type="checkbox"/> Other (Specify) _____	

TYPE OF SAMPLE (Check all applicable boxes)

<input type="checkbox"/> Drinking Water	<input type="checkbox"/> Groundwater	<input type="checkbox"/> Surface Water	<input type="checkbox"/> Wastewater
<input type="checkbox"/> Raw	<input type="checkbox"/> Water Treatment Plant (WTP)	<input type="checkbox"/> Distribution System	<input type="checkbox"/> Point of Use (POU)
<input type="checkbox"/> Treated (circle one): Chlorinated / Chloraminated / Chlorine Dioxide / Ozonated / Peroxzone / Fluoridated / Coagulated / pH Adjusted			
<input type="checkbox"/> Air Filters	Date/Time	<input type="checkbox"/> Seawater	<input type="checkbox"/> Sludge (Semi-solid Samples)
Finishing: _____	_____	<input type="checkbox"/> Milk	<input checked="" type="checkbox"/> Soil/Sediment
Starting: _____	_____	<input type="checkbox"/> Wipes	<input type="checkbox"/> Biota (Type): _____
Net (M ³) _____	_____	<input type="checkbox"/> Radon Canister	<input type="checkbox"/> Other: _____
<input type="checkbox"/> Air Charcoal Cartridge			

COMMENTS: (Cautions, etc.):

☐ Field Treatment: Preservatives added: _____ Iced/Frozen: _____ Other: _____
☐ Field Measurement: _____ mR/hr ☐ Radionuclide(s), if known: _____
☐ Rush/Priority (should be prearranged and have supervisory approval)

ANALYSIS REQUESTED (For questions, please call 510-620-2911)

<input type="checkbox"/> Gross Alpha	<input type="checkbox"/> Gross Beta	<input checked="" type="checkbox"/> Gamma Scan
<input type="checkbox"/> Total Uranium	<input type="checkbox"/> Total Beta (LSC)	<input type="checkbox"/> NORM (Gamma)
<input type="checkbox"/> Total Radium	<input type="checkbox"/> Tritium (³ H)	<input type="checkbox"/> Isotopic Americium / Curium
<input type="checkbox"/> Radium-226	<input type="checkbox"/> Carbon-14	<input type="checkbox"/> Isotopic Plutonium
<input type="checkbox"/> Radium-228	<input type="checkbox"/> Iodine-131	<input type="checkbox"/> Isotopic Thorium
<input type="checkbox"/> Radon-222	<input type="checkbox"/> Strontium-89, 90	<input type="checkbox"/> Isotopic Uranium
<input type="checkbox"/> Other (Specify): _____	<input type="checkbox"/> Nickel-63	<input type="checkbox"/> Iron-55

CHAIN OF CUSTODY

1.	Date 9/18/13 0930	Name (Print) K. HARKNESS	Signature <i>K. Harkness</i>	Date 9/19/13
	Time Custody Received 0930	Organization RHB-ICE		Time Custody Released 4 pm MAIL
2.	Date	Name (Print)	Signature	Date
	Time Custody Received	Organization		Time Custody Released
3.	Date 9-24-13	Name (Print) UA	Signature <i>Victoria M. Ovi</i>	Date
	Time Custody Received 14:00	Organization DWRLB		Time Custody Released

LABORATORY REMARKS (Leave Blank)

A. Condition at Time of Receipt:

<input type="checkbox"/> Acceptable	<input type="checkbox"/> Broken Container	<input type="checkbox"/> Leaked in Transit	<input type="checkbox"/> Improper Container
<input type="checkbox"/> Holding Time Exceeded	<input type="checkbox"/> Sample Not Cooled	<input type="checkbox"/> Insufficient Sample	

B. Preservatives/Carriers:

<input type="checkbox"/> Added While Sampling	<input type="checkbox"/> Added in Laboratory	<input type="checkbox"/> Not Added	<input type="checkbox"/> Not Applicable
---	--	------------------------------------	---



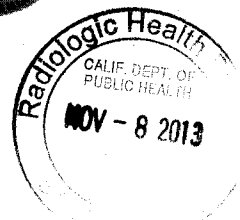
State of California - Health and Human Services Agency

California Department of Public Health

Drinking Water and Radiation Laboratory Branch

850 Marina Bay Parkway, Richmond, CA 94804

Phone: (510) 620-2911 Fax: (510) 620-2940



FINAL Analysis Results Report for Task ID. 13-0689

Investigator: Kathleen Harkness	RHB	Requestor: Roger Lupo	RHB
500 S. Kraemer # 235,		CDPH - RHB, 1500 Capitol Av., MS 7610	
Brea	CA 92821	Sacramento	CA 95814-5006
Phone Number: 714 524-1816		Phone Number: 916-440-7955	
Site/Project Name: San Onofre NPP / Beach Sand #3, Trail #6			
System No:	Billing Agency: RHB	Samples Received by Lab: 9/11/2013	

Parameter	Method	Result +/- CE	MDA 95	Units
Lab No: 13-0689-01	Sample ID: R 91823	Time Collected: 9/5/2013	16:45	Sampling Point: Sediment
	Sample Type: Soil/Sediment			
Dry Wt/Wet Wt		0.911		
K-40	HASL Ga-01-R	2.06 +/- 0.0745	0.223	pCi/g dry wt

- (1) Precision criteria for these method were determined to be acceptable.
- (2) CE is the counting error at the 95% confidence level as defined in Prescribed Procedures for Measurement of Radioactivity in Drinking Water, EPA-600/4-80-032, August 1980.
- (3) MDA95 is the sample specific minimum detectable activity at the 95% confidence level which is the LLD95 divided by 2.22, the efficiency, and the yield, and may include factors for abundance, decay, and ingrowth, dependent on the particular radio-nuclide. LLD95 is defined in section 7010G, Standard Methods for the Examination of Water and Wastewater, American Water Works Association, 21st Ed., 2005, where Sb is the square root of the instrument background count rate.

REQUEST FOR SAMPLE ANALYSIS (Radiochemical)

Sanitation and Radiation Laboratories Branch 850 Marina Bay Parkway, G164 Richmond, CA 94804 510-620-2911	Date Received <u>9-11-13</u>	Lab No. (Leave Blank) <u>130689</u>
	Date & Time Sampled <u>9/5/2013 1645</u>	Serial Number <u>R 91823</u>
Collector Information Name: <u>K. Harkness</u> Dept./Branch: <u>RHB-Brea</u> Address: _____ Telephone No.: <u>(714) 524-1816</u>	Reporting Information Name: <u>Roger Lupo</u> Dept./Branch: <u>RHB-Sacramento</u> Address: _____ Telephone No.: <u>(916) 440-7855</u>	
Sample Information System Name / Facility: <u>SONGS SEDIMENT</u> Sampling Point (s): <u>Beach Sand</u> System No.: <u>#3 - Trail #6</u>	Billing Agency <input type="checkbox"/> DWFOB () <input checked="" type="checkbox"/> RHB <input type="checkbox"/> RWQCB () <input type="checkbox"/> DTSC <input type="checkbox"/> DWTPB <input type="checkbox"/> FDB <input type="checkbox"/> DWR <input type="checkbox"/> CDFG <input type="checkbox"/> EMB <input type="checkbox"/> Other (Specify) _____	

TYPE OF SAMPLE (Check all applicable boxes)

- ☐ Drinking Water ☐ Groundwater ☐ Surface Water ☐ Wastewater
☐ Raw ☐ Water Treatment Plant (WTP) ☐ Distribution System ☐ Point of Use (POU)
☐ Treated (circle one): Chlorinated / Chloraminated / Chlorine Dioxide / Ozonated / Peroxzone / Fluoridated / Coagulated / pH Adjusted
- ☐ Air Filters Date/Time _____ ☐ Seawater ☐ Sludge (Semi-solid Samples)
 Finishing: _____ ☐ Milk ☒ Soil/Sediment
 Starting: _____ ☐ Wipes ☐ Biota (Type): _____
 Net (M³) _____ ☐ Radon Canister ☐ Other: _____
- ☒ Air Charcoal Cartridge

COMMENTS: (Cautions, etc.):

- ☐ Field Treatment: Preservatives added: _____ Iced/Frozen: _____ Other: _____
☐ Field Measurement: _____ mR/hr ☐ Radionuclide(s), if known: _____
☐ Rush/Priority (should be prearranged and have supervisory approval)

ANALYSIS REQUESTED (For questions, please call 510-620-2911)

- ☐ Gross Alpha ☐ Gross Beta ☒ Gamma Scan
☐ Total Uranium ☐ Total Beta (LSC) ☐ NORM (Gamma)
☐ Total Radium ☐ Tritium (3H) ☐ Isotopic Americium / Curium
☐ Radium-226 ☐ Carbon-14 ☐ Isotopic Plutonium
☐ Radium-228 ☐ Iodine-131 ☐ Isotopic Thorium
☐ Radon-222 ☐ Strontium-89, 90 ☐ Isotopic Uranium
☐ Other (Specify): _____ ☐ Nickel-63 ☐ Iron-55

CHAIN OF CUSTODY

- | | | | | |
|----|--|---|---------------------------------|--|
| 1. | Date
<u>9/5/2013</u>
<u>1645</u> | Name (Print)
<u>K. Harkness</u>
<u>RHB-Brea</u> | Signature
<u>K. Harkness</u> | Date
<u>9/5/2013</u>
<u>5 PM</u> |
| | Time Custody Received | Organization | | Time Custody Released |
| 2. | Date | Name (Print) | Signature | Date |
| | Time Custody Received | Organization | | Time Custody Released |
| 3. | Date
<u>9-11-13</u>
<u>14:00</u> | Name (Print)
<u>VA</u>
<u>DWRLB</u> | Signature
<u>[Signature]</u> | Date |
| | Time Custody Received | Organization | | Time Custody Released |

LABORATORY REMARKS (Leave Blank)

A. Condition at Time of Receipt:

- ☐ Acceptable ☐ Broken Container ☐ Leaked in Transit ☐ Improper Container
☐ Holding Time Exceeded ☐ Sample Not Cooled ☐ Insufficient Sample

B. Preservatives/Carriers:

- ☐ Added While Sampling ☐ Added in Laboratory ☐ Not Added ☐ Not Applicable



State of California - Health and Human Services Agency

California Department of Public Health

Drinking Water and Radiation Laboratory Branch

850 Marina Bay Parkway, Richmond, CA 94804

Phone: (510) 620-2911 Fax: (510) 620-2940



FINAL Analysis Results Report for Task ID. 13-0329

Investigator: J M S	DC REM	Requestor: Roger Lupo	RHB
San Louis Obisp CA		CDPH - RHB, 1500 Capitol Av., MS 7610	
Phone Number:		Sacramento CA 95814-5006	
		Phone Number: 916-440-7955	
Site/Project Name: San Onofre NPP / Sediment / 2nd Qtr 2013			
System No:	Billing Agency: RHB	Samples Received by Lab: 4/25/2013	

Parameter	Method	Result +/- CE	MDA 95	Units
Lab No: 13-0329-01	Sample ID: R 96278	Time Collected: 4/23/2013 15:08	Sampling Point: San Onofre F	
	Sample Type: Soil/Sediment			
Dry Wt/Wet Wt		0.787		
K-40	HASL Ga-01-R	14.0 +/- 0.308	0.272	pCi/g dry wt



- (1) Precision criteria for these method were determined to be acceptable.
- (2) CE is the counting error at the 95% confidence level as defined in Prescribed Procedures for Measurement of Radioactivity in Drinking Water, EPA-600/4-80-032, August 1980.
- (3) MDA95 is the sample specific minimum detectable activity at the 95% confidence level which is the LLD95 divided by 2.22, the efficiency, and the yield, and may include factors for abundance, decay, and ingrowth, dependent on the particular radio-nuclide. LLD95 is defined in section 7010G, Standard Methods for the Examination of Water and Wastewater, American Water Works Association, 21st Ed., 2005, where Sb is the square root of the instrument background count rate.

REQUEST FOR SAMPLE ANALYSIS (Radiochemical)

Drinking Water and Radiation Laboratory Branch 850 Marina Bay Parkway, G164 Richmond, CA 94804 510-620-2911	Date Received 4-25-13	Lab No. (Leave Blank) 13-0329
	Date & Time Sampled 4-23-13 15:06	Serial Number R 96278
Collector Information Name: Dept./Branch: Address: Telephone No.:	Reporting Information Name: Dept./Branch: Address: Telephone No.:	
Sample Information System Name / Facility: Sampling Point (s): System No.:	Billing Agency <input type="checkbox"/> DWFOB () <input type="checkbox"/> RHB <input type="checkbox"/> RWQCB () <input type="checkbox"/> DTSC <input type="checkbox"/> DWTPB <input type="checkbox"/> FDB <input type="checkbox"/> DWR <input type="checkbox"/> CDFG <input type="checkbox"/> EMB <input type="checkbox"/> Other (Specify) _____	

TYPE OF SAMPLE (Check all applicable boxes)

- ☐ Drinking Water ☐ Groundwater ☐ Surface Water ☐ Wastewater
☐ Raw ☐ Water Treatment Plant (WTP) ☐ Distribution System ☐ Point of Use (POU)
☐ Treated (circle one): Chlorinated / Chloraminated / Chlorine Dioxide / Ozonated / Peroxzone / Fluoridated / Coagulated / pH Adjusted
- ☐ Air Filters Date/Time _____ ☐ Seawater ☐ Sludge (Semi-solid Samples)
 Finishing: _____ ☐ Milk ☒ Soil/Sediment
 Starting: _____ ☐ Wipes ☐ Biota (Type): _____
 Net (M³) _____ ☐ Radon Canister ☐ Other: _____
☐ Air Charcoal Cartridge

COMMENTS: (Cautions, etc.):

- ☐ Field Treatment: Preservatives added: _____ Iced/Frozen: _____ Other: _____
☐ Field Measurement: _____ mR/hr ☐ Radionuclide(s), if known: _____
☐ Rush/Priority (should be prearranged and have supervisory approval)

ANALYSIS REQUESTED (For questions, please call 510-620-2911)

- ☐ Gross Alpha ☐ Gross Beta ☐ Gamma Scan
☐ Total Uranium ☐ Total Beta (LSC) ☐ NORM (Gamma)
☐ Total Radium ☐ Tritium (³H) ☐ Isotopic Americium / Curium
☐ Radium-226 ☐ Carbon-14 ☐ Isotopic Plutonium
☐ Radium-228 ☐ Iodine-131 ☐ Isotopic Thorium
☐ Radon-222 ☐ Strontium-89, 90 ☐ Isotopic Uranium
☐ Other (Specify): _____ ☐ Nickel-63 ☐ Iron-55

CHAIN OF CUSTODY

1.	Date 4-25-13	Name (Print) VA	Signature [Signature]	Date _____
	Time Custody Received 10:30	Organization DWR	Signature [Signature]	Time Custody Released _____
2.	Date _____	Name (Print) _____	Signature _____	Date _____
	Time Custody Received 4-25-13	Organization VA	Signature [Signature]	Time Custody Released _____
3.	Date 10:30	Name (Print) DWR	Signature [Signature]	Date _____
	Time Custody Received _____	Organization _____	Signature _____	Time Custody Released _____

LABORATORY REMARKS (Leave Blank)

- A. Condition at Time of Receipt:**
☐ Acceptable ☐ Broken Container ☐ Leaked in Transit ☐ Improper Container
☐ Holding Time Exceeded ☐ Sample Not Cooled ☐ Insufficient Sample
- B. Preservatives/Carriers:**
☐ Added While Sampling ☐ Added in Laboratory ☐ Not Added ☐ Not Applicable



State of California - Health and Human Services Agency

California Department of Public Health

Drinking Water and Radiation Laboratory Branch

850 Marina Bay Parkway, Richmond, CA 94804

Phone: (510) 620-2911 Fax: (510) 620-2940



FINAL Analysis Results Report for Task ID. 13-0328

Investigator: J M S	DC REM	Requestor: Roger Lupo	RHB
San Louis Obisp CA		CDPH - RHB, 1500 Capitol Av., MS 7610	
Phone Number:		Sacramento CA 95814-5006	
		Phone Number: 916-440-7955	
Site/Project Name: San Onofre NPP / 2nd Qtr 2013			
System No:	Billing Agency: RHB	Samples Received by Lab: 4/25/2013	

Parameter	Method	Result +/- CE	MDA 95	Units
Lab No: 13-0328-01	Sample ID: R 96277 Sample Type: Soil/Sediment	Time Collected: 4/23/2013 13:30	Sampling Point: San Onofre B / Sediment	
Dry Wt/Wet Wt		0.816		
K-40	HASL Ga-01-R	13.9 +/- 0.320	0.263	pCi/g dry wt

- (1) Precision criteria for these method were determined to be acceptable.
- (2) CE is the counting error at the 95% confidence level as defined in Prescribed Procedures for Measurement of Radioactivity in Drinking Water, EPA-600/4-80-032, August 1980.
- (3) MDA95 is the sample specific minimum detectable activity at the 95% confidence level which is the LLD95 divided by 2.22, the efficiency, and the yield, and may include factors for abundance, decay, and ingrowth, dependent on the particular radionuclide. LLD95 is defined in section 7010G, Standard Methods for the Examination of Water and Wastewater, American Water Works Association, 21st Ed., 2005, where Sb is the square root of the instrument background count rate.

REQUEST FOR SAMPLE ANALYSIS (Radiochemical)

Drinking Water and Radiation Laboratory Branch

850 Marina Bay Parkway, G164
Richmond, CA 94804
510-620-2911

Date Received

4-25-13

Lab No. (Leave Blank)

13-0328

Date & Time Sampled

4-23-13 13:30

Serial Number

R 96277

Collector Information

Name:

Dept./Branch:

Address:

JMS

Telephone No.:

Reporting Information

Name:

Dept./Branch:

Address:

Telephone No.:

Sample Information

System Name / Facility:

Sampling Point (s):

San Onofre B

Billing Agency

☐ DWFOB ()☐ RHB☐ RWQCB ()☐ DTSC☐ DWTPB☐ FDB☐ DWR☐ CDFG☐ EMB☐ Other (Specify) _____

System No.:

TYPE OF SAMPLE (Check all applicable boxes)

☐ Drinking Water☐ Groundwater☐ Surface Water☐ Wastewater☐ Raw☐ Water Treatment Plant (WTP)☐ Distribution System☐ Point of Use (POU)☐ Treated (circle one): Chlorinated / Chloraminated / Chlorine Dioxide / Ozonated / Peroxzone / Fluoridated / Coagulated / pH Adjusted☐ Air Filters

Date/Time

☐ Seawater☐ Sludge (Semi-solid Samples)

Finishing: _____

☐ Milk☐ Soil/Sediment

Starting: _____

☐ Wipes☐ Biota (Type): SedimentNet (M³) _____☐ Radon Canister☐ Other: _____☐ Air Charcoal Cartridge

COMMENTS: (Cautions, etc.):

☐ Field Treatment: Preservatives added: _____

Iced/Frozen: _____

Other: _____

☐ Field Measurement: _____ mR/hr☐ Radionuclide(s), if known: _____☐ Rush/Priority (should be prearranged and have supervisory approval)

ANALYSIS REQUESTED (For questions, please call 510-620-2911)

☐ Gross Alpha☐ Gross Beta☐ Gamma Scan☐ Total Uranium☐ Total Beta (LSC)☐ NORM (Gamma)☐ Total Radium☐ Tritium (³H)☐ Isotopic Americium / Curium☐ Radium-226☐ Carbon-14☐ Isotopic Plutonium☐ Radium-228☐ Iodine-131☐ Isotopic Thorium☐ Radon-222☐ Strontium-89, 90☐ Isotopic Uranium☐ Other (Specify): _____☐ Nickel-63☐ Iron-55

CHAIN OF CUSTODY

1.

Date

Name (Print)

Date

Time Custody Received

Organization

Signature

Time Custody Released

2.

Date

Name (Print)

Date

Time Custody Received

Organization

Signature

Time Custody Released

3.

Date

Name (Print)

Date

Time Custody Received

Organization

Signature

Time Custody Released

LABORATORY REMARKS (Leave Blank)

A. Condition at Time of Receipt:

☐ Acceptable☐ Broken Container☐ Leaked in Transit☐ Improper Container☐ Holding Time Exceeded☐ Sample Not Cooled☐ Insufficient Sample

B. Preservatives/Carriers:

☐ Added While Sampling☐ Added in Laboratory☐ Not Added☐ Not Applicable



State of California - Health and Human Services Agency

California Department of Public Health

Drinking Water and Radiation Laboratory Branch

850 Marina Bay Parkway, Richmond, CA 94804

Phone: (510) 620-2911 Fax: (510) 620-2940



FINAL Analysis Results Report for Task ID. 13-0331

Investigator: J M S	DC REM	Requestor: Roger Lupo	RHB
San Louis Obisp CA		CDPH - RHB, 1500 Capitol Av., MS 7610	
Phone Number:		Sacramento CA 95814-5006	
		Phone Number: 916-440-7955	
Site/Project Name: San Onofre NPP / 2nd Qtr 2013			
System No:	Billing Agency: RHB	Samples Received by Lab: 4/25/2013	

Parameter	Method	Result +/- CE	MDA 95	Units
Lab No: 13-0331-01	Sample ID: R 96280	Time Collected: 4/23/2013 12:45	Sampling Point: San Onofre D /	Sediment
	Sample Type: Soil/Sediment			
Dry Wt/Wet Wt		0.802		
K-40	HASL Ga-01-R	16.3 +/- 0.367	0.353	pCi/g dry wt

- (1) Precision criteria for these method were determined to be acceptable.
- (2) CE is the counting error at the 95% confidence level as defined in Prescribed Procedures for Measurement of Radioactivity in Drinking Water, EPA-600/4-80-032, August 1980.
- (3) MDA95 is the sample specific minimum detectable activity at the 95% confidence level which is the LLD95 divided by 2.22, the efficiency, and the yield, and may include factors for abundance, decay, and ingrowth, dependent on the particular radio-nuclide. LLD95 is defined in section 7010G, Standard Methods for the Examination of Water and Wastewater, American Water Works Association, 21st Ed., 2005, where Sb is the square root of the instrument background count rate.

REQUEST FOR SAMPLE ANALYSIS (Radiochemical)

Drinking Water and Radiation Laboratory Branch 850 Marina Bay Parkway, G164 Richmond, CA 94804 510-620-2911	Date Received 4-25-13	Lab No. (Leave Blank) 13-0331
	Date & Time Sampled 4-23-13 12:45	Serial Number R 96280
Collector Information Name: Dept./Branch: Address: Telephone No.:	Reporting Information Name: Dept./Branch: Address: Telephone No.:	
Sample Information System Name / Facility: Sampling Point (s): System No.:	Billing Agency <input type="checkbox"/> DWFOB () <input type="checkbox"/> RHB <input type="checkbox"/> RWQCB () <input type="checkbox"/> DTSC <input type="checkbox"/> DWTPB <input type="checkbox"/> FDB <input type="checkbox"/> DWR <input type="checkbox"/> CDFG <input type="checkbox"/> EMB <input type="checkbox"/> Other (Specify) _____	

TYPE OF SAMPLE (Check all applicable boxes)

<input type="checkbox"/> Drinking Water	<input type="checkbox"/> Groundwater	<input type="checkbox"/> Surface Water	<input type="checkbox"/> Wastewater
<input type="checkbox"/> Raw	<input type="checkbox"/> Water Treatment Plant (WTP)	<input type="checkbox"/> Distribution System	<input type="checkbox"/> Point of Use (POU)
<input type="checkbox"/> Treated (circle one): Chlorinated / Chloraminated / Chlorine Dioxide / Ozonated / Peroxzone / Fluoridated / Coagulated / pH Adjusted			
<input type="checkbox"/> Air Filters	Date/Time	<input type="checkbox"/> Seawater	<input type="checkbox"/> Sludge (Semi-solid Samples)
Finishing: _____	_____	<input type="checkbox"/> Milk	<input checked="" type="checkbox"/> Soil/Sediment
Starting: _____	_____	<input type="checkbox"/> Wipes	<input type="checkbox"/> Biota (Type): _____
Net (M ³) _____	_____	<input type="checkbox"/> Radon Canister	<input type="checkbox"/> Other: _____
<input type="checkbox"/> Air Charcoal Cartridge			

COMMENTS: (Cautions, etc.):

☐ Field Treatment: Preservatives added: _____ Iced/Frozen: _____ Other: _____
☐ Field Measurement: _____ mR/hr ☐ Radionuclide(s), if known: _____
☐ Rush/Priority (should be prearranged and have supervisory approval)

ANALYSIS REQUESTED (For questions, please call 510-620-2911)

<input type="checkbox"/> Gross Alpha	<input type="checkbox"/> Gross Beta	<input type="checkbox"/> Gamma Scan
<input type="checkbox"/> Total Uranium	<input type="checkbox"/> Total Beta (LSC)	<input type="checkbox"/> NORM (Gamma)
<input type="checkbox"/> Total Radium	<input type="checkbox"/> Tritium (³ H)	<input type="checkbox"/> Isotopic Americium / Curium
<input type="checkbox"/> Radium-226	<input type="checkbox"/> Carbon-14	<input type="checkbox"/> Isotopic Plutonium
<input type="checkbox"/> Radium-228	<input type="checkbox"/> Iodine-131	<input type="checkbox"/> Isotopic Thorium
<input type="checkbox"/> Radon-222	<input type="checkbox"/> Strontium-89, 90	<input type="checkbox"/> Isotopic Uranium
<input type="checkbox"/> Other (Specify): _____	<input type="checkbox"/> Nickel-63	<input type="checkbox"/> Iron-55

CHAIN OF CUSTODY

1.	Date _____	Name (Print) _____	Signature _____	Date _____
	Time Custody Received _____	Organization _____		Time Custody Released _____
2.	Date _____	Name (Print) _____	Signature _____	Date _____
	Time Custody Received _____	Organization _____		Time Custody Released _____
3.	Date 4-25-13	Name (Print) VA	Signature Victoria M. Allen	Date _____
	Time Custody Received 10:30	Organization DWRLB		Time Custody Released _____

LABORATORY REMARKS (Leave Blank)

A. Condition at Time of Receipt:			
<input type="checkbox"/> Acceptable	<input type="checkbox"/> Broken Container	<input type="checkbox"/> Leaked in Transit	<input type="checkbox"/> Improper Container
<input type="checkbox"/> Holding Time Exceeded	<input type="checkbox"/> Sample Not Cooled	<input type="checkbox"/> Insufficient Sample	
B. Preservatives/Carriers:			
<input type="checkbox"/> Added While Sampling	<input type="checkbox"/> Added in Laboratory	<input type="checkbox"/> Not Added	<input type="checkbox"/> Not Applicable



State of California - Health and Human Services Agency

California Department of Public Health

Drinking Water and Radiation Laboratory Branch

850 Marina Bay Parkway, Richmond, CA 94804

Phone: (510) 620-2911 Fax: (510) 620-2940



FINAL Analysis Results Report for Task ID. 13-0330

Investigator: J M S	DC REM	Requestor: Roger Lupo	RHB
		CDPH - RHB, 1500 Capitol Av., MS 7610	
San Louis Obisp	CA	Sacramento	CA 95814-5006
Phone Number:		Phone Number:	916-440-7955
Site/Project Name: San Onofre NPP / 2nd Qtr 2013			
System No:	Billing Agency: RHB	Samples Received by Lab: 4/25/2013	

Parameter	Method	Result +/- CE	MDA 95	Units
Lab No: 13-0330-01	Sample ID: R 96279 Sample Type: Soil/Sediment	Time Collected: 4/23/2013 12:10	Sampling Point: San Onofre C / Sediment	
Dry Wt/Wet Wt		0.783		
K-40	HASL Ga-01-R	13.6 +/- 0.310	0.261	pCi/g dry wt

- (1) Precision criteria for these method were determined to be acceptable.
- (2) CE is the counting error at the 95% confidence level as defined in Prescribed Procedures for Measurement of Radioactivity in Drinking Water, EPA-600/4-80-032, August 1980.
- (3) MDA95 is the sample specific minimum detectable activity at the 95% confidence level which is the LLD95 divided by 2.22, the efficiency, and the yield, and may include factors for abundance, decay, and ingrowth, dependent on the particular radio-nuclide. LLD95 is defined in section 7010G, Standard Methods for the Examination of Water and Wastewater, American Water Works Association, 21st Ed., 2005, where Sb is the square root of the instrument background count rate.

REQUEST FOR SAMPLE ANALYSIS (Radiochemical)

Drinking Water and Radiation Laboratory Branch 850 Marina Bay Parkway, G164 Richmond, CA 94804 510-620-2911	Date Received 4-25-13	Lab No. (Leave Blank) 13-0330
	Date & Time Sampled 4-23-13 12:10	Serial Number R 96279
Collector Information Name: Dept./Branch: Address: Telephone No.:	Reporting Information Name: Dept./Branch: Address: Telephone No.:	
Sample Information System Name / Facility: Sampling Point (s): System No.:	Billing Agency <input type="checkbox"/> DWFOB () <input type="checkbox"/> RHB <input type="checkbox"/> RWQCB () <input type="checkbox"/> DTSC <input type="checkbox"/> DWTPB <input type="checkbox"/> FDB <input type="checkbox"/> DWR <input type="checkbox"/> CDFG <input type="checkbox"/> EMB <input type="checkbox"/> Other (Specify) _____	

TYPE OF SAMPLE (Check all applicable boxes)

- ☐ Drinking Water ☐ Groundwater ☐ Surface Water ☐ Wastewater
☐ Raw ☐ Water Treatment Plant (WTP) ☐ Distribution System ☐ Point of Use (POU)
- ☐ Treated (circle one): Chlorinated / Chloraminated / Chlorine Dioxide / Ozonated / Peroxzone / Fluoridated / Coagulated / pH Adjusted
- ☐ Air Filters Date/Time ☐ Seawater ☐ Sludge (Semi-solid Samples)
 Finishing: _____
 Starting: _____
 Net (M³) _____
☐ Air Charcoal Cartridge
- ☐ Milk ☐ Soil/Sediment
☐ Wipes ☒ Biota (Type): _____
☐ Radon Canister ☐ Other: _____

COMMENTS: (Cautions, etc.):

- ☐ Field Treatment: Preservatives added: _____ Iced/Frozen: _____ Other: _____
☐ Field Measurement: _____ mR/hr ☐ Radionuclide(s), if known: _____
☐ Rush/Priority (should be prearranged and have supervisory approval)

ANALYSIS REQUESTED (For questions, please call 510-620-2911)

- ☐ Gross Alpha ☐ Gross Beta ☐ Gamma Scan
☐ Total Uranium ☐ Total Beta (LSC) ☐ NORM (Gamma)
☐ Total Radium ☐ Tritium (T₂H) ☐ Isotopic Americium / Curium
☐ Radium-226 ☐ Carbon-14 ☐ Isotopic Plutonium
☐ Radium-228 ☐ Iodine-131 ☐ Isotopic Thorium
☐ Radon-222 ☐ Strontium-89, 90 ☐ Isotopic Uranium
☐ Other (Specify): _____ ☐ Nickel-63 ☐ Iron-55

CHAIN OF CUSTODY

1.	Date	Name (Print)		Date
	Time Custody Received	Organization	Signature	Time Custody Released
2.	Date	Name (Print)		Date
	Time Custody Received	Organization	Signature	Time Custody Released
3.	Date	Name (Print)		Date
	Time Custody Received	Organization	Signature	Time Custody Released

LABORATORY REMARKS (Leave Blank)

- A. Condition at Time of Receipt:**
☐ Acceptable ☐ Broken Container ☐ Leaked in Transit ☐ Improper Container
☐ Holding Time Exceeded ☐ Sample Not Cooled ☐ Insufficient Sample
- B. Preservatives/Carriers:**
☐ Added While Sampling ☐ Added in Laboratory ☐ Not Added ☐ Not Applicable



State of California - Health and Human Services Agency

California Department of Public Health

Drinking Water and Radiation Laboratory Branch

850 Marina Bay Parkway, Richmond, CA 94804

Phone: (510) 620-2911 Fax: (510) 620-2940



FINAL Analysis Results Report for Task ID. 13-0270

Investigator: RHM	RHB	Requestor: Roger Lupo	RHB
		CDPH - RHB, 1500 Capitol Av., MS 7610	
SAN ONOFRE	CA	Sacramento	CA 95814-5006
Phone Number:		Phone Number: 916-440-7955	
Site/Project Name: San Onofre NPP / 2nd Qtr 2013			
System No:	Billing Agency: RHB	Samples Received by Lab: 4/16/2013	

Parameter	Method	Result +/- CE	MDA 95	Units
Lab No: 13-0270-01	Sample ID: R 92397	Time Collected: 4/11/2013 08:50	Sampling Point: Sediment	
	Sample Type: Soil/Sediment			
Dry Wt/Wet Wt		0.762		
K-40	HASL Ga-01-R	17.8 +/- 0.396	0.235	pCi/g dry wt

- (1) Precision criteria for these method were determined to be acceptable.
- (2) CE is the counting error at the 95% confidence level as defined in Prescribed Procedures for Measurement of Radioactivity in Drinking Water, EPA-600/4-80-032, August 1980.
- (3) MDA95 is the sample specific minimum detectable activity at the 95% confidence level which is the LLD95 divided by 2.22, the efficiency, and the yield, and may include factors for abundance, decay, and ingrowth, dependent on the particular radio-nuclide. LLD95 is defined in section 7010G, Standard Methods for the Examination of Water and Wastewater, American Water Works Association, 21st Ed., 2005, where Sb is the square root of the instrument background count rate.

REQUEST FOR SAMPLE ANALYSIS (Radiochemical)

Sanitation and Radiation Laboratories Branch 850 Marina Bay Parkway, G164 Richmond, CA 94804 510-620-2911	Date Received 4-16-13	Lab No. (Leave Blank) 13-0220
	Date & Time Sampled 4-11-13 10:35	Serial Number R 92397
Collector Information Name: Dept./Branch: RHM Address: Telephone No.:	Reporting Information Name: Dept./Branch: Address: Telephone No.:	
Sample Information System Name / Facility: San Onofre Sampling Point (s): System No.:	Billing Agency <input type="checkbox"/> DWFOB () <input type="checkbox"/> RHB <input type="checkbox"/> RWQCB () <input type="checkbox"/> DTSC <input type="checkbox"/> DWTPB <input type="checkbox"/> FDB <input type="checkbox"/> DWR <input type="checkbox"/> CDFG <input type="checkbox"/> EMB <input type="checkbox"/> Other (Specify) _____	

TYPE OF SAMPLE (Check all applicable boxes)

- ☐ Drinking Water ☐ Groundwater ☐ Surface Water ☐ Wastewater
☐ Raw ☐ Water Treatment Plant (WTP) ☐ Distribution System ☐ Point of Use (POU)
☐ Treated (circle one): Chlorinated / Chloraminated / Chlorine Dioxide / Ozonated / Peroxzone / Fluoridated / Coagulated / pH Adjusted
- ☐ Air Filters Date/Time ☐ Seawater ☐ Sludge (Semi-solid Samples)
 Finishing: _____ ☐ Milk ☐ Soil/Sediment
 Starting: _____ ☐ Wipes ☐ Biota (Type): _____
 Net (M³): _____ ☐ Radon Canister ☐ Other: **Sediment**
☐ Air Charcoal Cartridge

COMMENTS: (Cautions, etc.):

- ☐ Field Treatment: Preservatives added: _____ Iced/Frozen: _____ Other: _____
☐ Field Measurement: _____ mR/hr ☐ Radionuclide(s), if known: _____
☐ Rush/Priority (should be prearranged and have supervisory approval)

ANALYSIS REQUESTED (For questions, please call 510-620-2911)

- ☐ Gross Alpha ☐ Gross Beta ☐ Gamma Scan
☐ Total Uranium ☐ Total Beta (LSC) ☐ NORM (Gamma)
☐ Total Radium ☐ Tritium (³H) ☐ Isotopic Americium / Curium
☐ Radium-226 ☐ Carbon-14 ☐ Isotopic Plutonium
☐ Radium-228 ☐ Iodine-131 ☐ Isotopic Thorium
☐ Radon-222 ☐ Strontium-89, 90 ☐ Isotopic Uranium
☐ Other (Specify); _____ ☐ Nickel-63 ☐ Iron-55

CHAIN OF CUSTODY

1.	Date _____	Name (Print) _____	Signature _____	Date _____
	Time Custody Received _____	Organization _____	Signature _____	Time Custody Released _____
2.	Date _____	Name (Print) _____	Signature _____	Date _____
	Time Custody Received _____	Organization _____	Signature _____	Time Custody Released _____
3.	Date 4-16-13	Name (Print) U A	Signature [Signature]	Date _____
	Time Custody Received 2:30	Organization DWR L B	Signature [Signature]	Time Custody Released _____

LABORATORY REMARKS (Leave Blank)

- A. Condition at Time of Receipt:**
☐ Acceptable ☐ Broken Container ☐ Leaked in Transit ☐ Improper Container
☐ Holding Time Exceeded ☐ Sample Not Cooled ☐ Insufficient Sample
- B. Preservatives/Carriers:**
☐ Added While Sampling ☐ Added in Laboratory ☐ Not Added ☐ Not Applicable



State of California - Health and Human Services Agency

California Department of Public Health

Drinking Water and Radiation Laboratory Branch

850 Marina Bay Parkway, Richmond, CA 94804

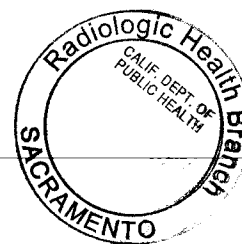
Phone: (510) 620-2911 Fax: (510) 620-2940



FINAL Analysis Results Report for Task ID. 13-0176

Investigator: Alan Rook	RHB	Requestor: Roger Lupo	RHB
500 S Kreamer Blvd., Suite 235		CDPH - RHB, 1500 Capitol Av., MS 7610	
Brea	CA 92821	Sacramento	CA 95814-5006
Phone Number: 714-524-1880		Phone Number: 916-440-7955	
Site/Project Name: San Onofre NPP / Sediment / 1st Qtr 2013			
System No:	Billing Agency: RHB	Samples Received by Lab: 3/6/2013	

Parameter	Method	Result +/- CE	MDA 95	Units
Lab No: 13-0176-01	Sample ID: R 93007	Time Collected: 3/4/2013 13:30	Sampling Point: Unit 3 SE SSA	
	Sample Type: Soil/Sediment			
Dry Wt/Wet Wt		0.957		
K-40	HASL Ga-01-R	18.1 +/- 0.405	0.192	pCi/g dry wt



- (1) Precision criteria for these method were determined to be acceptable.
- (2) CE is the counting error at the 95% confidence level as defined in Prescribed Procedures for Measurement of Radioactivity in Drinking Water, EPA-600/4-80-032, August 1980.
- (3) MDA95 is the sample specific minimum detectable activity at the 95% confidence level which is the LLD95 divided by 2.22, the efficiency, and the yield, and may include factors for abundance, decay, and ingrowth, dependent on the particular radionuclide. LLD95 is defined in section 7010G, Standard Methods for the Examination of Water and Wastewater, American Water Works Association, 21st Ed., 2005, where Sb is the square root of the instrument background count rate.

REQUEST FOR SAMPLE ANALYSIS (Radiochemical)

Sanitation and Radiation Laboratories Branch 850 Marina Bay Parkway, G164 Richmond, CA 94804 510-620-2911	Date Received 3-6-13	Lab No. (Leave Blank) 13-0176
	Date & Time Sampled 3/4/2013 1330	Serial Number R 93007
Collector Information Name: RHB BREA Dept./Branch: 500 S. KRAEMER BLVD Address: SUITE 235 BREA, CA Telephone No.: (714) 524-1880	Reporting Information Name: ROGER LUPO Dept./Branch: RHB SACRAMENTO Address: Telephone No.:	
Sample Information System Name / Facility: UNIT 3 SE Sampling Point (s): SSA01 System No.:	Billing Agency <input type="checkbox"/> DWFOB () <input checked="" type="checkbox"/> RHB <input type="checkbox"/> RWQCB () <input type="checkbox"/> DTSC <input type="checkbox"/> DWTPB <input type="checkbox"/> FDB <input type="checkbox"/> DWR <input type="checkbox"/> CDFG <input type="checkbox"/> EMB <input type="checkbox"/> Other (Specify) _____	

TYPE OF SAMPLE (Check all applicable boxes)

- ☐ Drinking Water ☐ Groundwater ☐ Surface Water ☐ Wastewater
☐ Raw ☐ Water Treatment Plant (WTP) ☐ Distribution System ☐ Point of Use (POU)
☐ Treated (circle one): Chlorinated / Chloraminated / Chlorine Dioxide / Ozonated / Peroxzone / Fluoridated / Coagulated / pH Adjusted
- ☐ Air Filters _____ Date/Time _____ ☐ Seawater ☐ Sludge (Semi-solid Samples)
 Finishing: _____ ☐ Milk ☒ Soil/Sediment
 Starting: _____ ☐ Wipes ☐ Biota (Type): _____
 Net (M³) _____ ☐ Radon Canister ☐ Other: _____
☐ Air Charcoal Cartridge

COMMENTS: (Cautions, etc.): **SHOULDER SEDIMENT SAMPLING**

- ☐ Field Treatment: Preservatives added: _____ Iced/Frozen: _____ Other: _____
☐ Field Measurement: _____ mR/hr ☐ Radionuclide(s), if known: _____
☐ Rush/Priority (should be prearranged and have supervisory approval)

ANALYSIS REQUESTED (For questions, please call 510-620-2911)

- ☐ Gross Alpha ☐ Gross Beta ☒ Gamma Scan
☐ Total Uranium ☐ Total Beta (LSC) ☐ NORM (Gamma)
☐ Total Radium ☐ Tritium (³H) ☐ Isotopic Americium / Curium
☐ Radium-226 ☐ Carbon-14 ☐ Isotopic Plutonium
☐ Radium-228 ☐ Iodine-131 ☐ Isotopic Thorium
☐ Radon-222 ☐ Strontium-89, 90 ☐ Isotopic Uranium
☐ Other (Specify): _____ ☐ Nickel-63 ☐ Iron-55

CHAIN OF CUSTODY

- | | | | |
|--|---|--------------------|---|
| 1. 3/4/2013
Date
1330
Time Custody Received | ALAN ROOK
Name (Print)
RHB BREA
Organization |
Signature | 3/5/2013
Date
1530
Time Custody Released |
| 2. _____
Date
Time Custody Received | _____
Name (Print)
Organization | _____
Signature | _____
Date
Time Custody Released |
| 3. 3-6-13
Date
11:45
Time Custody Received | UA
Name (Print)
DWRL
Organization |
Signature | _____
Date
Time Custody Released |

LABORATORY REMARKS (Leave Blank)

- A. Condition at Time of Receipt:**
☐ Acceptable ☐ Broken Container ☐ Leaked in Transit ☐ Improper Container
☐ Holding Time Exceeded ☐ Sample Not Cooled ☐ Insufficient Sample
- B. Preservatives/Carriers:**
☐ Added While Sampling ☐ Added in Laboratory ☐ Not Added ☐ Not Applicable



State of California - Health and Human Services Agency

California Department of Public Health

Drinking Water and Radiation Laboratory Branch

850 Marina Bay Parkway, Richmond, CA 94804

Phone: (510) 620-2911 Fax: (510) 620-2940



FINAL Analysis Results Report for Task ID. 13-0175

Investigator: Alan Rook	RHB	Requestor: Roger Lupo	RHB
500 S Kreamer Blvd., Suite 235		CDPH - RHB, 1500 Capitol Av., MS 7610	
Brea	CA 92821	Sacramento	CA 95814-5006
Phone Number: 714-524-1880		Phone Number: 916-440-7955	
Site/Project Name: San Onofre NPP / Sediment / 1st Qtr 2013			
System No:	Billing Agency: RHB	Samples Received by Lab: 3/6/2013	

Parameter	Method	Result +/- CE	MDA 95	Units
Lab No: 13-0175-01	Sample ID: R 93006	Time Collected: 3/4/2013	13:00	Sampling Point: San Onofre
	Sample Type: Soil/Sediment			
Dry Wt/Wet Wt		0.947		
K-40	HASL Ga-01-R	18.4 +/- 0.415	0.213	pCi/g dry wt

- (1) Precision criteria for these method were determined to be acceptable.
- (2) CE is the counting error at the 95% confidence level as defined in Prescribed Procedures for Measurement of Radioactivity in Drinking Water, EPA-600/4-80-032, August 1980.
- (3) MDA95 is the sample specific minimum detectable activity at the 95% confidence level which is the LLD95 divided by 2.22, the efficiency, and the yield, and may include factors for abundance, decay, and ingrowth, dependent on the particular radionuclide. LLD95 is defined in section 7010G, Standard Methods for the Examination of Water and Wastewater, American Water Works Association, 21st Ed., 2005, where Sb is the square root of the instrument background count rate.

REQUEST FOR SAMPLE ANALYSIS (Radiochemical)

Sanitation and Radiation Laboratories Branch 850 Marina Bay Parkway, G164 Richmond, CA 94804 510-620-2911	Date Received 3-6-13	Lab No. (Leave Blank) 13-0175
	Date & Time Sampled 3/4/2013 1300	Serial Number R 93006
Collector Information Name: RWB BREA Dept./Branch: Address: Telephone No.: (714) 524-1880	Reporting Information Name: ROGER WUP Dept./Branch: RWB SACRAMENTO Address: Telephone No.:	
Sample Information System Name / Facility: OLD MAN'S BEACH Sampling Point (s): SSA #2 System No.:	Billing Agency RAU <input type="checkbox"/> DWFOB () <input checked="" type="checkbox"/> RHB <input type="checkbox"/> RWQCB () <input type="checkbox"/> DTSC <input type="checkbox"/> DWTPB <input type="checkbox"/> FDB <input type="checkbox"/> DWR <input type="checkbox"/> CDFG <input type="checkbox"/> EMB <input type="checkbox"/> Other (Specify) _____	

TYPE OF SAMPLE (Check all applicable boxes)

- ☐ Drinking Water ☐ Groundwater ☐ Surface Water ☐ Wastewater
☐ Raw ☐ Water Treatment Plant (WTP) ☐ Distribution System ☐ Point of Use (POU)
☐ Treated (circle one): Chlorinated / Chloraminated / Chlorine Dioxide / Ozonated / Peroxzone / Fluoridated / Coagulated / pH Adjusted
- ☐ Air Filters ☐ Seawater ☐ Sludge (Semi-solid Samples)
 Finishing: _____ Date/Time: _____ ☐ Milk ☒ Soil/Sediment
 Starting: _____ ☐ Wipes ☐ Biota (Type): _____
 Net (M³) _____ ☐ Radon Canister ☐ Other: _____
☐ Air Charcoal Cartridge

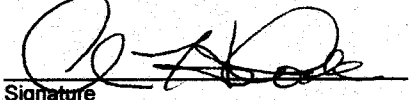
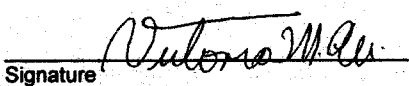
COMMENTS: (Cautions, etc.): SHORELINE SOUND SAMPLING

- ☐ Field Treatment: Preservatives added: _____ Iced/Frozen: _____ Other: _____
☐ Field Measurement: _____ mR/hr ☐ Radionuclide(s), if known: _____
☐ Rush/Priority (should be prearranged and have supervisory approval)

ANALYSIS REQUESTED (For questions, please call 510-620-2911)

- ☐ Gross Alpha ☐ Gross Beta ☒ Gamma Scan
☐ Total Uranium ☐ Total Beta (LSC) ☐ NORM (Gamma)
☐ Total Radium ☐ Tritium (³H) ☐ Isotopic Americium / Curium
☐ Radium-226 ☐ Carbon-14 ☐ Isotopic Plutonium
☐ Radium-228 ☐ Iodine-131 ☐ Isotopic Thorium
☐ Radon-222 ☐ Strontium-89, 90 ☐ Isotopic Uranium
☐ Other (Specify): _____ ☐ Nickel-63 ☐ Iron-55

CHAIN OF CUSTODY

- | | | | | |
|----|---|--|--|---|
| 1. | Date 3/4/2013
Time Custody Received 1300 | Name (Print) DAVID RECK
Organization RWB BREA | Signature  | Date 3/5/2013
Time Custody Released 1530 |
| 2. | Date _____
Time Custody Received _____ | Name (Print) _____
Organization _____ | Signature _____ | Date _____
Time Custody Released _____ |
| 3. | Date 3-6-13
Time Custody Received 11:45 | Name (Print) UA
Organization DWRLB | Signature  | Date _____
Time Custody Released _____ |

LABORATORY REMARKS (Leave Blank)

- A. Condition at Time of Receipt:**
☐ Acceptable ☐ Broken Container ☐ Leaked in Transit ☐ Improper Container
☐ Holding Time Exceeded ☐ Sample Not Cooled ☐ Insufficient Sample
- B. Preservatives/Carriers:**
☐ Added While Sampling ☐ Added in Laboratory ☐ Not Added ☐ Not Applicable



State of California - Health and Human Services Agency

California Department of Public Health

Drinking Water and Radiation Laboratory Branch

850 Marina Bay Parkway, Richmond, CA 94804

Phone: (510) 620-2911 Fax: (510) 620-2940



FINAL Analysis Results Report for Task ID. 13-0174

Investigator: Alan Rook	RHB	Requestor: Roger Lupo	RHB
500 S Kreamer Blvd., Suite 235		CDPH - RHB, 1500 Capitol Av., MS 7610	
Brea	CA 92821	Sacramento	CA 95814-5006
Phone Number: 714-524-1880		Phone Number: 916-440-7955	
Site/Project Name: San Onofre NPP / Sediment / 1st Qt 2013			
System No:	Billing Agency: RHB	Samples Received by Lab: 3/6/2013	

Parameter	Method	Result +/- CE	MDA 95	Units
Lab No: 13-0174-01	Sample ID: R 93005 Sample Type: Soil/Sediment	Time Collected: 3/4/2013 12:20	Sampling Point: San Onofre State Beach, SSA 03	
Dry Wt/Wet Wt		0.905		
K-40	HASL Ga-01-R	5.16 +/- 0.136	0.209	pCi/g dry wt

- (1) Precision criteria for these method were determined to be acceptable.
- (2) CE is the counting error at the 95% confidence level as defined in Prescribed Procedures for Measurement of Radioactivity in Drinking Water, EPA-600/4-80-032, August 1980.
- (3) MDA95 is the sample specific minimum detectable activity at the 95% confidence level which is the LLD95 divided by 2.22, the efficiency, and the yield, and may include factors for abundance, decay, and ingrowth, dependent on the particular radionuclide. LLD95 is defined in section 7010G, Standard Methods for the Examination of Water and Wastewater, American Water Works Association, 21st Ed., 2005, where Sb is the square root of the instrument background count rate.

REQUEST FOR SAMPLE ANALYSIS (Radiochemical)

Sanitation and Radiation Laboratories Branch 850 Marina Bay Parkway, G164 Richmond, CA 94804 510-620-2911	Date Received 3-6-13	Lab No. (Leave Blank) 13 13-0574
	Date & Time Sampled 3/4/2013 1220	Serial Number R 93005
Collector Information Name: RHB BREA Dept./Branch: Address: Telephone No.: (714) 524-1080	Reporting Information Name: ROGER LUPO Dept./Branch: RHB SACRAMENTO Address: Telephone No.:	
Sample Information System Name / Facility: SOUGS STATE Sampling Point (s): (SSA 03) PARK BEACH System No.: SAJOURE STATE BEACH	Billing Agency <input type="checkbox"/> DWFOB () <input checked="" type="checkbox"/> RHB <input type="checkbox"/> RWQCB () <input type="checkbox"/> DTSC <input type="checkbox"/> DWTPB <input type="checkbox"/> FDB <input type="checkbox"/> DWR <input type="checkbox"/> CDFG <input type="checkbox"/> EMB <input type="checkbox"/> Other (Specify)	

TYPE OF SAMPLE (Check all applicable boxes)

- ☐ Drinking Water ☐ Groundwater ☐ Surface Water ☐ Wastewater
☐ Raw ☐ Water Treatment Plant (WTP) ☐ Distribution System ☐ Point of Use (POU)
☐ Treated (circle one): Chlorinated / Chloraminated / Chlorine Dioxide / Ozonated / Peroxzone / Fluoridated / Coagulated / pH Adjusted
- ☒ Air Filters _____ Date/Time _____ ☐ Seawater ☐ Sludge (Semi-solid Samples)
 Finishing: _____ ☐ Milk ☒ Soil/Sediment
 Starting: _____ ☐ Wipes ☐ Biota (Type): _____
 Net (M³) _____ ☐ Radon Canister ☐ Other: _____
☐ Air Charcoal Cartridge

COMMENTS: (Cautions, etc.): SHORELINE SEDIMENT SAMPLING

- ☐ Field Treatment: Preservatives added: _____ Iced/Frozen: _____ Other: _____
☒ Field Measurement: _____ mR/hr ☐ Radionuclide(s), if known: _____
☐ Rush/Priority (should be prearranged and have supervisory approval)

ANALYSIS REQUESTED (For questions, please call 510-620-2911)

- ☐ Gross Alpha ☐ Gross Beta ☒ Gamma Scan
☐ Total Uranium ☐ Total Beta (LSC) ☐ NORM (Gamma)
☐ Total Radium ☐ Tritium (³H) ☐ Isotopic Americium / Curium
☐ Radium-226 ☐ Carbon-14 ☐ Isotopic Plutonium
☐ Radium-228 ☐ Iodine-131 ☐ Isotopic Thorium
☐ Radon-222 ☐ Strontium-89, 90 ☐ Isotopic Uranium
☐ Other (Specify): _____ ☐ Nickel-63 ☐ Iron-55

CHAIN OF CUSTODY

- | | | | | |
|----|--------------------------------|---------------------------|---------------|-------------------------------|
| 1. | Date
3/4/2013 | Name (Print)
ALAN ROSE | Signature
 | Date
3/5/2013 |
| | Time Custody Received
1220 | Organization
RHB BREA | | Time Custody Released
1530 |
| 2. | Date | Name (Print) | Signature | Date |
| | Time Custody Received | Organization | | Time Custody Released |
| 3. | Date
3-6-13 | Name (Print)
V. K. | Signature
 | Date |
| | Time Custody Received
11:35 | Organization
DWRLB | | Time Custody Released |

LABORATORY REMARKS (Leave Blank)

- A. Condition at Time of Receipt:**
☐ Acceptable ☐ Broken Container ☐ Leaked in Transit ☐ Improper Container
☐ Holding Time Exceeded ☐ Sample Not Cooled ☐ Insufficient Sample
- B. Preservatives/Carriers:**
☐ Added While Sampling ☐ Added in Laboratory ☐ Not Added ☐ Not Applicable



State of California - Health and Human Services Agency

California Department of Public Health

Drinking Water and Radiation Laboratory Branch

850 Marina Bay Parkway, Richmond, CA 94804

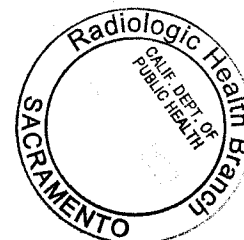
Phone: (510) 620-2911 Fax: (510) 620-2940



FINAL Analysis Results Report for Task ID. 13-0173

Investigator: Alan Rook	RHB	Requestor: Roger Lupo	RHB
500 S Kreamer Blvd., Suite 235		CDPH - RHB, 1500 Capitol Av., MS 7610	
Brea	CA 92821	Sacramento	CA 95814-5006
Phone Number: 714-524-1880		Phone Number: 916-440-7955	
Site/Project Name: San Onofre NPP / Sediment / 1st Qtr 2013			
System No:	Billing Agency: RHB	Samples Received by Lab: 3/6/2013	

Parameter	Method	Result +/- CE	MDA 95	Units
Lab No: 13-0173-01	Sample ID: R 93004 Sample Type: Soil/Sediment	Time Collected: 3/4/2013 10:15	Sampling Point: Newport Beach SSA 04	
Dry Wt/Wet Wt		0.929		
K-40	HASL Ga-01-R	19.4 +/- 0.435	0.184	pCi/g dry wt



- (1) Precision criteria for these method were determined to be acceptable.
- (2) CE is the counting error at the 95% confidence level as defined in Prescribed Procedures for Measurement of Radioactivity in Drinking Water, EPA-600/4-80-032, August 1980.
- (3) MDA95 is the sample specific minimum detectable activity at the 95% confidence level which is the LLD95 divided by 2.22, the efficiency, and the yield, and may include factors for abundance, decay, and ingrowth, dependent on the particular radionuclide. LLD95 is defined in section 7010G, Standard Methods for the Examination of Water and Wastewater, American Water Works Association, 21st Ed., 2005, where Sb is the square root of the instrument background count rate.

REQUEST FOR SAMPLE ANALYSIS (Radiochemical)

Sanitation and Radiation Laboratories Branch 850 Marina Bay Parkway, G164 Richmond, CA 94804 510-620-2911	Date Received 3-6-13	Lab No. (Leave Blank) 13-0173
	Date & Time Sampled 3/4/2013 1015	Serial Number R 93004
Collector Information Name: RHB BREA Dept./Branch: Address: Telephone No.: (714) 524-1880	Reporting Information Name: ROGER WUPO Dept./Branch: RHB SACRAMENTO Address: Telephone No.:	
Sample Information System Name / Facility: NEWPORT BEACH Sampling Point (s): SSA 04 System No.:	Billing Agency <input type="checkbox"/> DWFOB () <input checked="" type="checkbox"/> RHB <input type="checkbox"/> RWQCB () <input type="checkbox"/> DTSC <input type="checkbox"/> DWTPB <input type="checkbox"/> FDB <input type="checkbox"/> DWR <input type="checkbox"/> CDFG <input type="checkbox"/> EMB <input type="checkbox"/> Other (Specify) _____	

TYPE OF SAMPLE (Check all applicable boxes)

- ☐ Drinking Water ☐ Groundwater ☐ Surface Water ☐ Wastewater
☐ Raw ☐ Water Treatment Plant (WTP) ☐ Distribution System ☐ Point of Use (POU)
☐ Treated (circle one): Chlorinated / Chloraminated / Chlorine Dioxide / Ozonated / Peroxzone / Fluoridated / Coagulated / pH Adjusted
- ☐ Air Filters ☐ Seawater ☐ Sludge (Semi-solid Samples)
 Finishing: _____ ☐ Milk ☒ Soil/Sediment
 Starting: _____ ☐ Wipes ☐ Biota (Type): _____
 Net (M³) _____ ☐ Radon Canister ☐ Other: _____
- ☐ Air Charcoal Cartridge

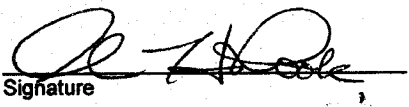
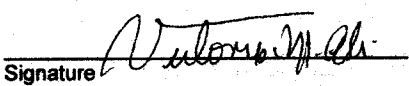
COMMENTS: (Cautions, etc.): **SHORELINE SEDIMENT SAMPLING**

- ☐ Field Treatment: Preservatives added: _____ Iced/Frozen: _____ Other: _____
☐ Field Measurement: _____ mR/hr ☐ Radionuclide(s), if known: _____
☐ Rush/Priority (should be prearranged and have supervisory approval)

ANALYSIS REQUESTED (For questions, please call 510-620-2911)

- ☐ Gross Alpha ☐ Gross Beta ☒ Gamma Scan
☐ Total Uranium ☐ Total Beta (LSC) ☐ NORM (Gamma)
☐ Total Radium ☐ Tritium (³H) ☐ Isotopic Americium / Curium
☐ Radium-226 ☐ Carbon-14 ☐ Isotopic Plutonium
☐ Radium-228 ☐ Iodine-131 ☐ Isotopic Thorium
☐ Radon-222 ☐ Strontium-89, 90 ☐ Isotopic Uranium
☐ Other (Specify): _____ ☐ Nickel-63 ☐ Iron-55

CHAIN OF CUSTODY

- | | | | | |
|----|---------------------------------------|----------------------------------|---|--------------------------------------|
| 1. | Date
3/4/2013 | Name (Print)
ALAN Rook | Signature
 | Date
3/5/2013 |
| | Time Custody Received
1015 | Organization
RHB BREA | | Time Custody Released
1530 |
| 2. | Date | Name (Print) | Signature | Date |
| | Time Custody Received | Organization | | Time Custody Released |
| 3. | Date
3-6-13 | Name (Print)
VA | Signature
 | Date |
| | Time Custody Received
11:45 | Organization
DWR LRB | | Time Custody Released |

LABORATORY REMARKS (Leave Blank)

- A. Condition at Time of Receipt:**
☐ Acceptable ☐ Broken Container ☐ Leaked in Transit ☐ Improper Container
☐ Holding Time Exceeded ☐ Sample Not Cooled ☐ Insufficient Sample
- B. Preservatives/Carriers:**
☐ Added While Sampling ☐ Added in Laboratory ☐ Not Added ☐ Not Applicable